

2007-CDOS-SEQ-001-0403

**SEQUOIA VOTING
SYSTEMS**

**PROJECT
OVERVIEW**

COPY

**2007-CDOS-SEQ-001-0403
PROJECT OVERVIEW BINDER “A.2”**

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INTRODUCTION



Introduction

On April 3, 2007, Sequoia Voting Systems approached the Colorado Secretary of State's Office with an application to certify a voting system. The application was accepted by the Voting Systems Certification Program Testing Board (Testing Board). The system was assigned certification number: 2007-CDOS-SEQ-001-0403.

The voting system is known by its federal certification name as "WinEDS 3.1.074." Federal certification is to the 2002VSS standards, and was obtained on October 23rd, 2006 (NA SED#: N-1-07-22-22-004).

The testing board proceeded to evaluate the Sequoia voting system during the time period of April 3rd – December 1st. All findings are documented within the binders A.2 – 31, as well as addendum binders: 7.1, 13.1, 14.1, 16.1, 17.1, 18.1, 19.1, 21.1, 22.1, 23.1, 24.1, 25.1, 25.2, and 26.1.

The Project Overview Binders (Binders "A – C including addendum binders") provides an overview of the findings of the project, and the following additional information:

- Introduction
- System Components
- Recommendation to the Secretary of State
- Restrictions on the use of the voting system suggested by the Testing Board
- Conditions to the Recommendation suggested by the Testing Board
- Additional Comments by the Testing Board
- Independent Audit Reports
- Miscellaneous Correspondence of importance

During the process of certifying the system, the Testing Board adhered to the procedures outlined by the Voting System Program procedures document. The certification process was led by Jerome Lovato, with Tim Bishop and Michael Chadwell providing the primary cross evaluation. Additional cross check and documentation verification was conducted by Danny Casias with additional coordination by the Program Manager – John Gardner with assistance from Tim Bishop as necessary.

The testing board evaluated the voting system in accordance with the requirements set forth in Secretary of State Rule 45, as well as applicable elements contained within the laws of the Help America Vote Act, Colorado Revised Statute, multiple sections of Title 1, and Secretary of State Rules as appropriate. All testing results and output which includes extensive video documentation of the evaluation process have been archived and well preserved in accordance with the Voting Systems Program procedures document.

Through the evaluation, the testing board identified a variety of deficiencies within the system which include functionality, security, auditability and documentation requirements. The following sections will address these deficiencies as either a restriction for use (preventing recommendation by the testing board), or a condition for use (allowing the system to be recommended provided conditional elements are adhered to). Restrictions are identified in a one-to-one value. One identified restriction = one failure on the Detail Test Summary. Conditional elements represent a one-to-many value. The execution of a single condition

placed on the use of the system in many cases will address multiple failures as the testing board often experienced failures that exhibited a “daisy chain” effect. One high level failure would trigger many follow up test scenarios. Refer to the comments section of this binder for additional comments on this topic.



Detailed Test Summary

The testing board executed the testing process for the Sequoia Voting System in the manner prescribed by Rule 45, and the detailed procedures document provided on the Voting Systems Certification Program website (<http://www.elections.colorado.gov/DDefault.aspx?tid=501>).

The outcome of the process involved over 700 functional test evaluations, 4405 detailed line items for document review, and over 90 supplemental tests comprising the sections for application review, demonstration and work on completing the trusted build. The documentation comprised of this test work is evident in over 50 binders generated by the testing board, a multitude of boxes containing evidence generated from devices, ballots, reports, and other findings. In addition to this evidence, over 200 DVD records exist documenting the process of the testing board.

Below is the summary report of test status generated by the testing board regarding the Sequoia Voting System evaluation:

Sequoia						
	# Requirements	# Passed	# Failed	Binder Status		% Passed
Phase I - Application	22	14	8	signed		63.64%
Phase II - Doc. Review	4406	3259	1136	signed		73.97%
Phase III - Demo	54	49	5	signed		90.74%
Phase III - Trusted Build	20	12	6	signed		60.00%
Phase III - Functional Test (overall)	737	566	171		100.00%	76.80%
Security	139	113	26			81.29%
System Process	339	255	84			75.22%
Election (pre, ED and post)	259	198	61			76.45%
Independent Audit	1674	1674		Review of Test Board work.		100.00%
Phase IV - Certification Doc.	n/a	n/a	n/a	n/a	n/a	
Phase V - Qualification Report	n/a	n/a	n/a	n/a	n/a	

Requirements Status for Colorado Certification of Sequoia Voting System

Section Category	Binder #	Category	Sec	Total # of Tests to complete	Status:	DRE (edge 2)	DRE Edge 2 plus)	PCOS	CCOS	EMS	Remaining to complete
Section "A" - Pre Testing	1	Application	aa	22	Pass	n/a	n/a	n/a	n/a	13	0
					Pass Conditional	n/a	n/a	n/a	n/a	1	
					Suspend	n/a	n/a	n/a	n/a		
					Fail	n/a	n/a	n/a	n/a	8	
					Not applicable	n/a	n/a	n/a	n/a		
	2-6	Documentation Review	ab	4405	Pass	381	48	289	273	276	0
					Pass Conditional						
					Suspend						
					Fail	92	452	134	89	84	
					Not applicable	408	381	458	519	521	
	7	Demonstration	ac	54	Pass	5	5	10	10	12	0
					Pass Conditional	1	1	2	2	1	
					Suspend						
					Fail	1	1	1	1	1	
					Not applicable						
	8	Trusted Build	ad	20	Pass	2		4	2	2	0
					Pass Conditional						
					Suspend						
					Fail	2			2	2	
					Not applicable	1		1	1	1	
9-12	Source Code Review	ae	0	Not applicable	n/a	n/a	n/a	n/a	n/a	0	

Requirements Status for Colorado Certification of Sequoia Voting System

Section Category	Binder #	Category	Sec	Total # of Tests to complete	Status:	DRE (edge 2)	DRE Edge 2 plus)	PCOS	CCOS	EMS	Remaining to complete	
Section "B" - Security Testing	13	System Access	ba	36	Pass	1		1		9	0	
					Pass Conditional							
					Suspend							
					Fail	5		4	5	6		
					Not applicable	1		2	1	1		
	14	Operating System Security	bb	20	Pass						0	
					Pass Conditional							
					Suspend							
					Fail					2		
					Not applicable	4	5			9		
	15	Database Security	bc	24	Not applicable	3	3	6	6	6	0	
	16	Removable Media	bd	13	Pass					1	1	0
					Pass Conditional							
					Suspend							
					Fail	1		1		1		
					Not applicable	1	1	2	2	2		
	17	Networking and Telecommunications	be	46	Pass	3		2	4	4	0	
					Pass Conditional	1		1		1		
					Suspend							
					Fail	1						
Not applicable					7		9	7	6			

Requirements Status for Colorado Certification of Sequoia Voting System

Section Category	Binder #	Category	Seq	Total # of Tests to complete	Status:	DRE (edge 2)	DRE Edge 2 plus)	PCOS	CCOS	EMS	Remaining to complete
Section "C" - System Testing	18	System	ca	47	Pass	6		3		12	0
					Pass Conditional						
					Suspend						
					Fail	3		5		16	
					Not applicable					2	
	18	System (central count)	cb	11	Pass	n/a	n/a	n/a	3	n/a	0
					Pass Conditional	n/a	n/a	n/a		n/a	
					Suspend	n/a	n/a	n/a		n/a	
					Fail	n/a	n/a	n/a	4	n/a	
					Not applicable	n/a	n/a	n/a	4	n/a	
	19-20	Ballot Process	cc	152	Pass	21		38	27	25	0
					Pass Conditional	1					
					Suspend						
					Fail	2		6	5	1	
					Not applicable	1		2	14	9	
	21	Performance	cd	24	Pass	1		2	1	4	0
					Pass Conditional						
					Suspend						
					Fail	7		3	4	2	
					Not applicable						
	21	DRE Processing	ce	24	Pass	12		n/a	n/a	n/a	0
					Pass Conditional	2		n/a	n/a	n/a	
					Suspend			n/a	n/a	n/a	
					Fail	3		n/a	n/a	n/a	
					Not applicable	7		n/a	n/a	n/a	
	22	Audits	cf	29	Pass	6		5	4	1	0
					Pass Conditional						
					Suspend						
Fail					1		2	3	7		
Not applicable											
22	Reports	cg	52	Pass	6		7	4	9	0	
				Pass Conditional							
				Suspend							
				Fail	2		3	4	1		
				Not applicable	5		5	3	3		

Requirements Status for Colorado Certification of Sequoia Voting System

Section Category	Binder #	Category	Seq	Total # of Tests to complete	Status:	DRE (edge 2)	DRE Edge 2 plus)	PCOS	CCOS	EMS	Remaining to complete	
Section "D" - Election Day Tests	23	Hardware Diagnostics Testing	da	8	Pass	1		1				0
					Pass Conditional							
					Suspend							
					Fail	1			1			
					Not applicable			1	1	2		
	23	Voting	db	65	Pass	14		19	19	6		0
					Pass Conditional							
					Suspend							
					Fail	1			1			
					Not applicable	2		1	1	1		
	24	Multi-Page Ballots	dc	6	Pass			2	1	1		0
					Pass Conditional							
					Suspend							
					Fail							
					Not applicable	2						
	24	Multiple Languages	dd	4	Pass	1		1	1	1		0
					Pass Conditional							
					Suspend							
					Fail							
					Not applicable							
	24	Provisional	de	25	Pass	3		1	3	3		0
					Pass Conditional	1						
					Suspend							
					Fail	3		2	2	2		
					Not applicable			3	1	1		
	25	V-VPAT	df	28	Pass	23		n/a	n/a	n/a		0
					Pass Conditional	1		n/a	n/a	n/a		
					Suspend			n/a	n/a	n/a		
Fail					2	1	n/a	n/a	n/a			
Not applicable					1		n/a	n/a	n/a			
25	Accessibility	dg	80	Pass	29	17	n/a	n/a	n/a		0	
				Pass Conditional	1		n/a	n/a	n/a			
				Suspend			n/a	n/a	n/a			
				Fail	9	22	n/a	n/a	n/a			
				Not applicable	2		n/a	n/a	n/a			
26	Closing Polls	dh	30	Pass	10		10	n/a	n/a		0	
				Pass Conditional				n/a	n/a			
				Suspend				n/a	n/a			
				Fail	5		5	n/a	n/a			
				Not applicable				n/a	n/a			

Requirements Status for Colorado Certification of Sequoia Voting System

Section Category	Binder #	Category	Seq	Total # of Tests to complete	Status:	DRE (edge 2)	DRE Edge 2 plus)	PCOS	CCOS	EMS	Remaining to complete
Section "E" - Post Election	27	Post Election Audit	ea	4	Pass					1	0
					Pass Conditional						
					Suspend						
					Fail	1		1	1		
					Not applicable						
	27	Recount	eb	8	Pass			2	2	1	0
					Pass Conditional	1					
					Suspend						
					Fail				1		
					Not applicable	1					
	27	Recount (central count)	ec	1	Pass	n/a	n/a	n/a	1	n/a	0
					Pass Conditional	n/a	n/a	n/a		n/a	
					Suspend	n/a	n/a	n/a		n/a	
					Fail	n/a	n/a	n/a		n/a	
					Not applicable	n/a	n/a	n/a		n/a	

Archive Storage Boxes for the Sequoia Voting System Certification Process:



Backup Binders documenting the Sequoia Voting System Certification Process (original binders moved to archive storage upon completion of process):



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COMPONENTS



Components

As submitted on April 3, 2007, the following components comprise the requested voting system package from Sequoia Voting Systems:

Component Name	System Function	Version Number
WinEDS	Software Application	3.1.074
Optech Insight / Insight Plus	Precinct Optical Scanner which includes: Insight Memory Pack Receiver	HPX K1.44/APX 2.12 2.15
Optech 400-C	Central Count Optical Scanner which includes: WinETP software	3.00 1.14.3
AVC Edge II	Direct Record Electronic Device which includes: Card Activator VeriVote Edge Audio Unit	5.0.31 5.0.31 4.3 5.0 Rev. C
AVC Edge II Plus	Direct Record Electronic Device which includes: HAAT Model 50	1.2.33 2.1.18

Photographs and additional details on each component can be found under test # AA6-P1-605.

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RECOMMENDATION



Recommendation Overview

The approach of the testing board regarding a recommendation is absolute. Any one item outstanding in the **Restrictions** section of the binder (no “conditional use” option discoverable by the testing board) will trigger a “N” value on the **Recommendation** table.

Therefore, for quick understanding of the overall outstanding deficiencies with the system, and to provide a summary of reasons for the “Y” or “N” value in the **Recommendation** table.

The following table provides a high level summary statement of findings by the testing board. These items constitute a summary of the findings in the **Restrictions** section of the project overview binder.

Component (details in the components section)	Recommended to be Certified?	Reason
Software (WinEDS)	No	<ul style="list-style-type: none"> Failure to provide required State Documentation
Precinct Scanner (Insight)	No	<ul style="list-style-type: none"> Failure to provide required State Documentation
Central Count Scanner (400-C)	No	<ul style="list-style-type: none"> Failure to provide required State Documentation
DRE (Edge II w/ activator)	No	<ul style="list-style-type: none"> Failure to provide required State Documentation Failure for device to operate in a secured state requiring passwords. Failure to provide auditable data to detect security violations. Failure to ensure all electronic records have corresponding V-VPAT records. Paper Record not accessible to blind voters. Failure to meet state requirements for Accessibility
DRE (Edge II Plus w/ HAAT)	No	<ul style="list-style-type: none"> Failure to prove Federal Testing was conducted Failure to provide required State Documentation Paper Record not accessible to blind voters. Failure to meet state requirements for Accessibility



Sequoia Recommendation for voting system application:

2007-CDOS-SEQ-001-0403

12/10/07

Binary Assessment (with conditionals)

<u>Component</u>	<u>Version</u>	<u>Accuracy</u>	<u>Security</u>	<u>Accessibility</u>	<u>Compliance</u>	<u>Testing Board Recommendation</u>
WINEDS	3.1.074	Y ³	Y ³	N/A	N ²	N
400-C w/ WINETP	3.00/1.14.3	Y ³	Y ³	Y ³	N ²	N
INSIGHT/INSIGHT PLUS w/components	HPX K1.44/APX 2.12	Y ³	Y ³	Y ³	N ²	N
EDGE II w/Card Activator	5.0.31	Y ³	N	N	N ²	N
EDGE II PLUS w/HAAT	1.2.33	Y ³	Y ³	N	N ^{1,2}	N

¹ Colorado Revised Statutes Title 1, Article 5, Section 6 (1-5-608.5) prohibits allowing certification of voting equipment by the Secretary of State if it has not been successfully qualified by a recognized ITA. Additionally, Rule 45.5.1.3 requires voting systems to be compliant with federal requirements.

² Missing/insufficient state documentation pursuant to Colorado Secretary of State Rule 45.

³ Provided jurisdictions follow additional procedural steps outlined in the **Conditions** section to mitigate the deficiencies of the system as evaluated. Should conditions not be applied or adhered to as indicated in this binder, the testing board would reject the system and modify the value to a "N." This is specifically addressed in the test board comments section of this binder.

Definitions:

Accuracy – correctly reading, displaying, tabulating and reporting votes. (Functional, or Performance)

Security – vote data is protected and maintains integrity throughout system processing. (Audit, Security or Telecommunications)

Accessibility – voter system have requisite usability and reliability. (Functional, Accessibility, or Physical Design)

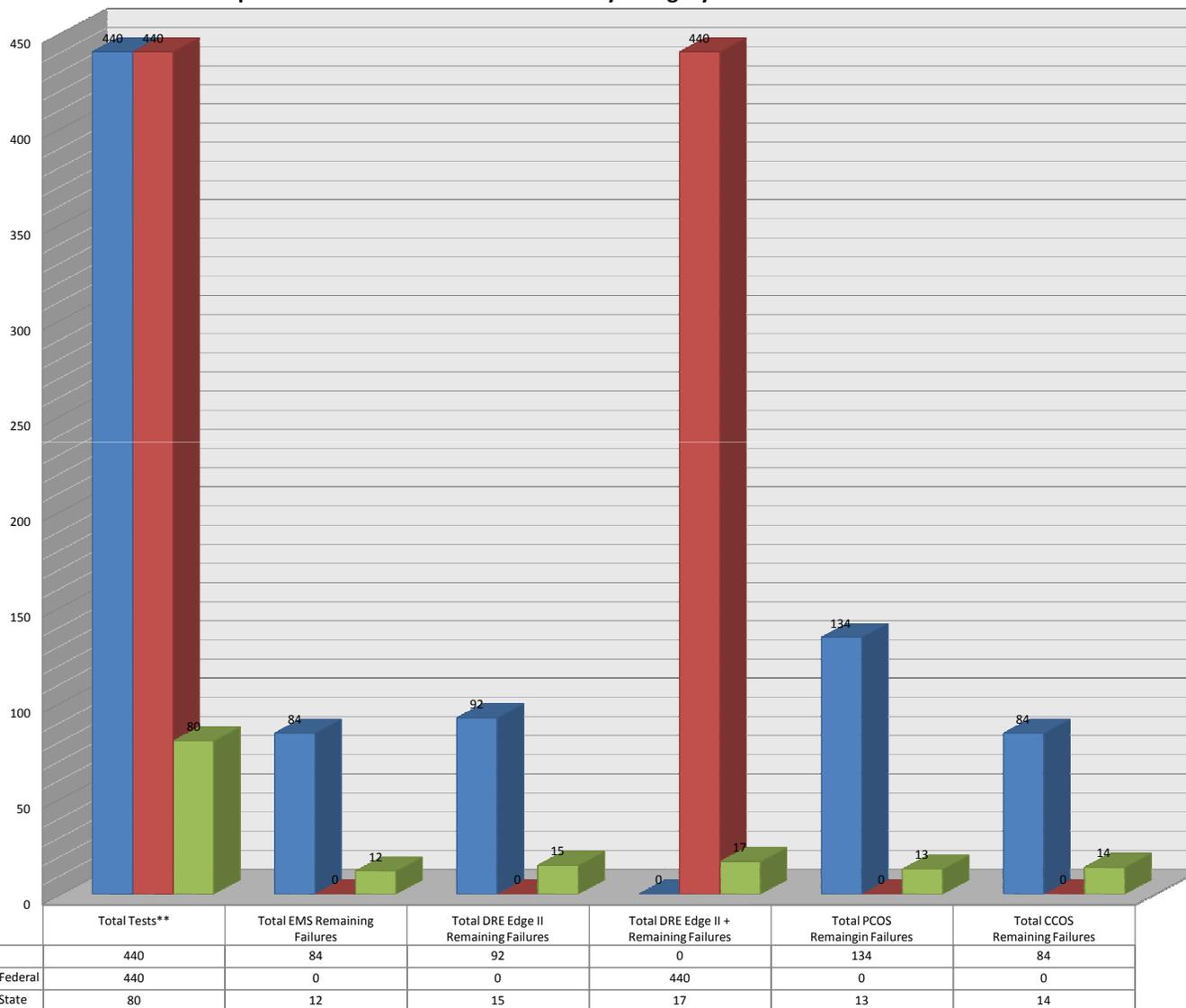
Compliance – system conforms to federal requirements for certification and/or documentation. (Documentation)

Sequoia Failue Status by Category



	Total Tests	Total EMS Remaining Failures	Total Edge II Remaining Failures	Total Edge II + Remaining Failures	Total PCOS Remaining Failures	Total CCOS Remaining Failures
Functional Requirements	521	0	0	0	0	0
Performance Levels	8	0	0	0	0	0
Physical design	63	0	0	0	0	0
Audit Capacity	33	6	2	0	0	0
Security	453	0	5	0	0	0
Telecommunications	30	0	0	0	0	0
Accessibility	41	0	8	18	0	0

Sequoia Documentation Failure Status by Category



* Incorrectly tested means the ITA either reported that a required item was not tested, or a required item was tested incorrectly for the device type.

** Total tests has N/A items removed for chart scale.

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RESTRICTIONS



The Testing Board has identified the following items as deficient in the voting system, requiring restriction for use of the voting system components based on the review and testing of the voting system for compliance with state requirements:

Software Restrictions:

WinEDS 3.1.074

1) Documentation Requirements

Documentation was not provided by the voting system vendor to meet and test these requirements.

Rule

Text

- | | |
|-------------|--|
| 45.5.2.2.3 | The voting system provider shall publish and specify processing standards for each component of the voting system as part of the documentation required for certification. |
| 45.5.2.4.1 | In addition to other documentation requirements in this rule, the voting system provider shall provide the following documents:
(e) A list of minimum services needed for successful, secure and hardened operation of all components of voting system. |
| 45.5.2.5.2 | The voting systems shall include detailed documentation as to the level, location, and programming of audit trail information throughout the system. The audit information shall apply to:
(a) Operating Systems (workstation, server, and/or DRE);
(b) Election Programming Software;
(d) Election Result Consolidation and Reporting. |
| 45.5.2.6.1 | All voting systems submitted for certification shall meet the following minimum system security requirements:
(d) The voting system shall meet the following requirements for operating system security:
(iv) The voting system provider shall provide documentation containing a list of minimum services and executables that are required to run the voting system application; |
| 45.5.2.7.10 | Voting systems providers shall document how they plan to monitor and respond to known threats to which their voting systems are vulnerable. This documentation shall provide a detailed description, including scheduling information, of the procedures the voting system provider will use to:
(a) Monitor threats, such as through the review of assessments, advisories, and alerts for COTS components;
(b) Evaluate the threats and, if any, proposed responses.
(c) Develop responsive updates to the system and/or corrective procedures;
(d) As part of certification requirements of the proposed system, provide assistance to customers, either directly or through detailed written procedures, how to update their systems and/or to implement the corrective procedures within the timeframe established by the Secretary of State. |

Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.

Precinct Count Scanner Restrictions:

Insight/Insight Plus (and components)	Rule	Text
1) Documentation Requirements Insufficient documentation.	45.5.1.2	All voting system software, hardware, and firmware shall meet all requirements of federal law that address accessibility for the voter interface of the voting system. These laws include, but are not necessarily limited to, (a) the Help America Vote Act
Documentation was not provided by the voting system vendor to meet these requirements.	45.5.2.2.3	The voting system provider shall publish and specify processing standards for each component of the voting system as part of the documentation required for certification.
	45.5.2.3.2	The voting system shall meet the following environmental controls allowing for storage and operation in the following physical ranges: (b) Non-Operating – Max. 140 Degrees Fahrenheit; Min. 4 Degrees Fahrenheit. Non-operating humidity ranges from 5% to 90% for various intervals throughout the day. The material supplied by the voting system provider shall include a statement of all requirements and restrictions regarding environmental protection, electrical service, telecommunications service, and any other facility or resource required for the installation, operation, and storage of the voting system.
	45.5.2.3.19	All electronic voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. (e) The voting system provider shall deliver to the Secretary of State documentation specifying the steps and times required for charging batteries for each type of optical scanner, ballot imager, DRE and V-VPAT they provide.
Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.	45.5.2.6.2	The voting system provider shall provide documentation detailing voting system security in the areas listed below. The system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: (i) Preventing access to vote data, including individual votes and vote totals, to unauthorized individuals.
	45.5.2.6.3	The voting system provider shall submit to the Secretary of State its recommended policies or guidelines governing: (e) Protection abilities of a particular operating system; (f) General characteristics of supervisory access privileges; (g) Segregation of duties;

Insight/Insight Plus (and components)

Documentation Requirements continued

Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.

Rule

45.5.2.7.10

Text

Voting systems providers shall document how they plan to monitor and respond to known threats to which their voting systems are vulnerable. This documentation shall provide a detailed description, including scheduling information, of the procedures the voting system provider will use to:

- (a) Monitor threats, such as through the review of assessments, advisories, and alerts for COTS components;
- (b) Evaluate the threats and, if any, proposed responses.
- (c) Develop responsive updates to the system and/or corrective procedures; and
- (d) As part of certification requirements of the proposed system, provide assistance to customers, either directly or through detailed written procedures, how to update their systems and/or to implement the corrective procedures within the timeframe established by the Secretary of State.

Central Count Scanner Restrictions:

400-C w/WinETP

Rule

Text

1) Documentation Requirements

Documentation was not provided by the voting system vendor to meet these requirements.

45.5.1.2

All voting system software, hardware, and firmware shall meet all requirements of federal law that address accessibility for the voter interface of the voting system. These laws include, but are not necessarily limited to, (a) the Help America Vote Act

45.5.2.2.3

The voting system provider shall publish and specify processing standards for each component of the voting system as part of the documentation required for certification.

45.5.2.3.2

The voting system shall meet the following environmental controls allowing for storage and operation in the following physical ranges:

- (a) Operating – Max. 95 Degrees Fahrenheit; Min 50 Degrees Fahrenheit, with max. humidity of 90%, normal or minimum operating humidity of 15%.
- (b) Non-Operating – Max. 140 Degrees Fahrenheit; Min. 4 Degrees Fahrenheit. Non-operating humidity ranges from 5% to 90% for various intervals throughout the day.

The material supplied by the voting system provider shall include a statement of all requirements and restrictions regarding environmental protection, electrical service, telecommunications service, and any other facility or resource required for the installation, operation, and storage of the voting system.

400-C w/WinETP

Documentation Requirements continued

	Rule	Text
	45.5.2.3.19	All electronic voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. (d) The voting system provider shall deliver to the Secretary of State documentation detailing estimated time of operation on battery for each type of optical scanner, ballot imager, DRE, and V-VPAT they provide, assuming continuous use of the devices by voters during an interruption of normal electrical power. (e) The voting system provider shall deliver to the Secretary of State documentation specifying the steps and times required for charging batteries for each type of optical scanner, ballot imager, DRE and V-VPAT they provide.
	45.5.2.4.1	In addition to other documentation requirements in this rule, the voting system provider shall provide the following documents: (e) A list of minimum services needed for successful, secure and hardened operation of all components of voting system.
Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.	45.5.2.6.1	All voting systems submitted for certification shall meet the following minimum system security requirements: (d) The voting system shall meet the following requirements for operating system security: (iv) The voting system provider shall provide documentation containing a list of minimum services and executables that are required to run the voting system application;
Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.	45.5.2.6.3	The voting system provider shall submit to the Secretary of State its recommended policies or guidelines governing: (f) General characteristics of supervisory access privileges; (g) Segregation of duties;
	45.5.2.7.10	Voting systems providers shall document how they plan to monitor and respond to known threats to which their voting systems are vulnerable. This documentation shall provide a detailed description, including scheduling information, of the procedures the voting system provider will use to: (a) Monitor threats, such as through the review of assessments, advisories, and alerts for COTS components; (b) Evaluate the threats and, if any, proposed responses. (c) Develop responsive updates to the system and/or corrective procedures;

DRE Restrictions:

AVC Edge II: 5.0.31 (w/ activator)

1) Documentation Requirements
Insufficient documentation.

Rule

Text

<p>45.5.1.2</p>	<p>45.5.1.2</p>	<p>All voting system software, hardware, and firmware shall meet all requirements of federal law that address accessibility for the voter interface of the voting system. These laws include, but are not necessarily limited to, (a) the Help America Vote Act, (b) the Americans with Disabilities Act, and (c) the Federal Rehabilitation Act. The voting system provider shall acknowledge explicitly that their proposed software, hardware, and firmware are all in compliance with the relevant accessibility portions of these laws.</p>
<p>Documentation was not provided by the voting system vendor to meet these requirements.</p>	<p>45.5.2.2.3</p>	<p>The voting system provider shall publish and specify processing standards for each component of the voting system as part of the documentation required for certification.</p>
<p>Documentation was not provided by the voting system vendor to meet these requirements.</p>	<p>45.5.2.3.2</p>	<p>The voting system shall meet the following environmental controls allowing for storage and operation in the following physical ranges: (a) Operating – Max. 95 Degrees Fahrenheit; Min 50 Degrees Fahrenheit, with max. humidity of 90%, normal or minimum operating humidity of 15%. (b) Non-Operating – Max. 140 Degrees Fahrenheit; Min. 4 Degrees Fahrenheit. Non-operating humidity ranges from 5% to 90% for various intervals throughout the day. The material supplied by the voting system provider shall include a statement of all requirements and restrictions regarding environmental protection, electrical service, telecommunications service, and any other facility or resource required for the installation, operation, and storage of the voting system.</p>
<p>Documentation provided by the voting system vendor is inconclusive to determine the outcome of this test.</p>	<p>45.5.2.3.13</p>	<p>All DRE voting devices shall use touch screen technology or other technology providing visual ballot display and selection. The voting system provider shall include documentation concerning the use of touch screen or other display and selection technology, including but not limited to: (b) Technical documentation describing the nature and sensitivity of any other technology used to display and select offices, candidates, or issues;</p>
<p>Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.</p>	<p>45.5.2.6.3</p>	<p>The voting system provider shall submit to the Secretary of State its recommended policies or guidelines governing: (d) Effective password management; (e) Protection abilities of a particular operating system; (f) General characteristics of supervisory access privileges; (g) Segregation of duties;</p>

AVC Edge II: 5.0.31 (w/ activator)

Documentation Requirements continued

Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.

Rule

Text

45.5.2.7.10 Voting systems providers shall document how they plan to monitor and respond to known threats to which their voting systems are vulnerable. This documentation shall provide a detailed description, including scheduling information, of the procedures the voting system provider will use to:
(a) Monitor threats, such as through the review of assessments, advisories, and alerts for COTS components;
(b) Evaluate the threats and, if any, proposed responses.
(c) Develop responsive updates to the system and/or corrective procedures; and
(d) As part of certification requirements of the proposed system, provide assistance to customers, either directly or through detailed written procedures, how to update their systems and/or to implement the corrective procedures within the timeframe established by the Secretary of State.

45.5.2.8.2 Documentation of the accessibility of the voting system shall include the following items at a minimum:
(c) Technology used by the voting system that prevents headset/headphone interference with hearing aids;

2) Audit Capacity

45.5.2.5.3 The voting system shall track and maintain audit information of the following voting system application events:
(a) Log on and log off activity.

45.5.2.5.5 If a vote tabulation device employs the use of removable memory storage devices, the devices shall allow for an alternate method of transfer of audit records if the device and/or memory storage device is damaged or destroyed.

3) Security Requirements

System components did not demonstrate requirements for security.

45.5.2.6.1 All voting systems submitted for certification shall meet the following minimum system security requirements:
(a) The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply:
(vi) Voting system provider shall not have administrative account, or administrative account access.
(e) The voting system shall meet the following requirements for password security:
(i) All passwords shall be stored and used in a non-reversible format;
(iv) The application's database management system shall require separate passwords for the administrative and each user/operator accounts with access to the application.
(vi) The system shall be designed in such a way to facilitate the changing of passwords for each election cycle.
(vii) The use of blank or empty passwords shall not be permitted at any time with the exception of a limited one-time use startup password which requires a new password to be assigned before the system can be used.

**AVC Edge II: 5.0.31 (w/
activator)**

4) Accessibility

Rule	Text
1-5-704	(1) Notwithstanding any other provision of this article, each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards:
35.1.5	
35.1.6	
35.1.8	
35.1.11	(d) Devices providing audio and visual access shall be able to work both separately and simultaneously. (e) If a nonaudio access approach is provided, the voting system may not require color perception. The voting system shall use black text or graphics, or both, on white background or white text or graphics, or both, on black background, unless the secretary of state approves other high-contrast color combinations that do not require color perception. (g) The voting system shall provide audio information, including any audio output using synthetic or recorded human speech or any auditory feedback tones that are important for the use of the audio approach, through at least one mode, by handset or headset, at high volume and shall provide incremental volume control with output amplification up to a level of at least ninety-seven decibel sound pressure level with one incremental level of eighty-nine decibel sound pressure level. (h) For voice signals transmitted to the elector, the voting system shall provide a gain adjustable up to a minimum of twenty decibels with at least one intermediate step of twelve decibels. (j) If sound cues and audible information such as "beeps" are used, simultaneous corresponding visual cues and information shall be provided.
37.1.4	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. (d) The paper record shall be accessible for individuals with disabilities including non-visual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.
45.5.2.9.10	The V-VPAT device shall be designed to allow every voter to review, and accept or reject his/her paper record in as private and independent manner as possible for both disabled and nondisabled voters.

AVC Edge II Plus 1.2.33 (with HAAT)

1) Documentation Requirements

Insufficient federal certification compliance/documentation, i.e. 2002 VSS requirements matrix.

Rule

Text

45.5.1.1

All voting systems shall meet the voting systems standards pursuant to section 1-5-601.5, C.R.S., and Secretary of State Rule 37.3.

1-5-601.5

Compliance with federal requirements. All voting systems and voting equipment offered for sale on or after May 28, 2004, shall meet the voting systems standards that were promulgated in 2002 by the federal election commission and that may thereafter be promulgated by the federal election assistance commission. Subject to section 1 5-608.2, nothing in this section shall be construed to require any political subdivision to replace a voting system that is in use prior to May 28, 2004.

45.5.1.2

All voting system software, hardware, and firmware shall meet all requirements of federal law that address accessibility for the voter interface of the voting system. These laws include, but are not necessarily limited to, (a) the Help America Vote Act, (b) the Americans with Disabilities Act, and (c) the Federal Rehabilitation Act. The voting system provider shall acknowledge explicitly that their proposed software, hardware, and firmware are all in compliance with the relevant accessibility portions of these laws.

Documentation was not provided by the voting system vendor to meet these requirements.

45.5.2.2.3

The voting system provider shall publish and specify processing standards for each component of the voting system as part of the documentation required for certification.

45.5.2.3.2

The voting system shall meet the following environmental controls allowing for storage and operation in the following physical ranges:

(a) Operating – Max. 95 Degrees Fahrenheit; Min 50 Degrees Fahrenheit, with max. humidity of 90%, normal or minimum operating humidity of 15%.

(b) Non-Operating – Max. 140 Degrees Fahrenheit; Min. 4 Degrees Fahrenheit. Non-operating humidity ranges from 5% to 90% for various intervals throughout the day.

The material supplied by the voting system provider shall include a statement of all requirements and restrictions regarding environmental protection, electrical service, telecommunications service, and any other facility or resource required for the installation, operation, and storage of the voting system.

AVC Edge II Plus 1.2.33 (with HAAT)

Documentation Requirements continued

Rule

Text

- 45.5.2.3.16 The processing subsystem contains all mechanical, electromechanical, and electronic devices required to perform the logical and numerical functions of interpreting the electronic image of the voted ballot and assigning votes to the proper memory registers. Attributes of the processing subsystem that affect its suitability for use in a voting system, are accuracy, speed, reliability, and maintainability. (a) Processing accuracy refers to the ability of the subsystem to receive electronic signals produced by vote marks and timing information, to perform logical and numerical operations upon these data, and to reproduce the contents of memory when required without error. Processing subsystem accuracy shall be measured as bit error rate, which is the ratio of uncorrected data bit errors to the number of total data bits processed when the system is operated at its nominal or design rate of processing in a time interval of four (4) hours. The bit error rate shall include all errors from any source in the processing subsystem. For all types of systems, the Maximum Acceptable Value (MAV) for this error rate shall be one (1) part in five hundred thousand (500,000) ballot positions, and the Nominal Specification Value (NSV) shall be one (1) part in ten million (10,000,000) ballot positions.
- 45.5.2.3.19 All electronic voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data.

(e) The voting system provider shall deliver to the Secretary of State documentation specifying the steps and times required for charging batteries for each type of optical scanner, ballot imager, DRE and V-VPAT they provide.
- 45.5.2.4.2 All VSTL qualification reports, test logs, and technical data packages shall be evaluated to determine if the voting system meets the requirements of this rule and have completed the applicable federal certification requirements at the time of State testing. Failure to provide such documentation of independent testing will result in the voting system application being rejected.

(a) The voting system provider shall execute and submit any necessary releases for the applicable VSTL and/or EAC to discuss any and all procedures and findings relevant to the voting system submitted for certification with the Secretary of State's office. The voting system provider shall provide a copy of the same to the Secretary of State's office.
- 45.5.2.6.3 The voting system provider shall submit to the Secretary of State its recommended policies or guidelines governing:

(f) General characteristics of supervisory access privileges;

(g) Segregation of duties;

Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.

AVC Edge II Plus 1.2.33 (with HAAT)

Documentation Requirements continued

Documentation was not provided by the voting system vendor to allow testing board to evaluate this requirement.

Rule

Text

45.5.2.7.10 Voting systems providers shall document how they plan to monitor and respond to known threats to which their voting systems are vulnerable. This documentation shall provide a detailed description, including scheduling information, of the procedures the voting system provider will use to:

- (a) Monitor threats, such as through the review of assessments, advisories, and alerts for COTS components;
- (b) Evaluate the threats and, if any, proposed responses.
- (c) Develop responsive updates to the system and/or corrective procedures; and
- (d) As part of certification requirements of the proposed system, provide assistance to customers, either directly or through detailed written procedures, how to update their systems and/or to implement the corrective procedures within the timeframe established by the Secretary of State.

45.5.2.8.2 Documentation of the accessibility of the voting system shall include the following items at a minimum:

- (c) Technology used by the voting system that prevents headset/headphone interference with hearing aids;

2) Accessibility

The Testing Board was unable to evaluate these items for this device due to errors in programming provided by the vendor that were not corrected.

1-5-704

(1) Notwithstanding any other provision of this article, each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards:

(b) The voting system shall provide a method by which electors can confirm any tactile or audio input by audio output using synthetic or recorded human speech.

(d) [35.1.5] Devices providing audio and visual access shall be able to work both separately and simultaneously.

(g) [35.1.8] The voting system shall provide audio information, including any audio output using synthetic or recorded human speech or any auditory feedback tones that are important for the use of the audio approach, through at least one mode, by handset or headset, at high volume and shall provide incremental volume control with output amplification up to a level of at least ninety-seven decibel sound pressure level with one incremental level of eighty-nine decibel sound pressure level.

(j) [35.1.11] If sound cues and audible information such as "beeps" are used, simultaneous corresponding visual cues and information shall be provided.

(n) Audio ballots shall meet the following standards:

(III) The elector shall be able to determine how many candidates may be selected for each office.

(IV) The elector shall have the ability to verify that the physical or vocal inputs given to the voting system have selected the candidates that the elector intended to select.

(V) The elector shall be able to review the candidate selections that the elector has made.

(VI) Before casting the ballot, the elector shall have the opportunity to change any selections previously made and confirm a new selection.

AVC Edge II Plus 1.2.33 (with HAAT)

Accessibility continued

Rule	Text
	<p>(VII) The voting system shall communicate to the elector the fact that the elector has failed to vote for an office or has failed to vote the number of allowable candidates for an office and require the elector to confirm his or her intent to undervote before casting the ballot.</p> <p>(IX) The elector shall have the opportunity to input a candidate's name for each office that allows a write-in candidate.</p> <p>(X) The elector shall have the opportunity to review the elector's write-in input to the voter interface device, edit that input, and confirm that the edits meet the elector's intent.</p> <p>(XI) The voting system shall require a clear, identifiable action from the elector to cast the ballot. The voting system shall explain to the elector how to take this action so that the elector has minimal risk of taking the action accidentally, but when the elector intends to cast the ballot, the action can be easily performed.</p> <p>(XII) After the ballot is cast, the voting system shall confirm to the elector that the ballot has been cast and the elector's process of voting is complete.</p> <p>(XIII) After the ballot is cast, the voting system shall prevent the elector from modifying the ballot cast or voting another ballot.</p>
34.5	<p>If a political subdivision acquires a new voting system, the system must be accessible to persons with physical, cultural/educational, mental/cognitive disabilities and provide the voter in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.</p>
35.1.2	<p>The voting system shall provide a method by which voters can confirm any tactile or audio input by having the capability of audio output using synthetic or recorded human speech, which is reasonably phonetically accurate.</p>
37.1.4	<p>The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system.</p> <p>(d) The paper record shall be accessible for individuals with disabilities including non-visual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.</p>
45.5.2.9.10	<p>The V-VPAT device shall be designed to allow every voter to review, and accept or reject his/her paper record in as private and independent manner as possible for both disabled and nondisabled voters.</p>

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PROJECT OVERVIEW BINDER “A.2”**

CONDITIONS



Conditions for Use

The Testing Board would also recommend the following conditions for use of the voting system. These conditions are required to be in place *should* the Secretary approve for certification any or all of the items indicated in the **COMPONENTS** section. Being that many conditions address the security, auditability and availability of the system component, the testing board would firmly reject any option which removes, replaces or diminishes the conditional requirement and still allow the system to be used and recommended for certification. Any "Y" value in the recommendation table would change to a "N" value with any change to the conditions.

Global Conditions (applies to all components):

- 1) Modem and other telecommunication devices may not be used on any subsystem component - system provider was unable to meet or provide prerequisite FIPS 140/180 certifications.
- 2) Provisional ballots must be processed separately from non-conditional ballots - system subcomponents are unable to functionally differentiate and correctly process to Colorado specific requirements.
- 3) Coordination of Escrow Setup - Upon Certification, voting system manufacturer must coordinate the Escrow of the TRUSTED BUILD software with SOS escrow, or third party escrow service as required by Rule 11 prior to use in Colorado.
- 4) Abstract Report Generation - abstracts used for State reporting must come from WinEDS Software, or other external solution, rather than from the specific device.
- 5) Trusted Build Verification (all software and firmware components)
 - a) The system components do not allow for proper verification of trusted build software. Any breach of custody and/or other security incidents will require the rebuild of the component with the state trusted build software. This requirement applies to all voting devices, firmware and software components of the system.
 - b) Counties shall ensure that hardware, software and firmware purchased for use of the system matches the specifications of VSTL/EAC and/or State Certified and trusted versions, not to the version presented in the vendor documentation.
- 6) Counties using the voting system shall testify through their security plan submission that the voting system is used only on a closed network.

Software Conditions (WinEDS 3.1.074):

- 1) System/Database/Network Security Hardening.
 - a) Because the voting system operates in a non-restricted system configuration containing open file system access to locate, copy, open and overwrite without detection, election vote content database files outside of election management system application by third-party tools, counties will be required to modify their physical environmental conditions, or work with current Sequoia documentation (not currently tested) and request variance from the Secretary of State to use Sequoia hardening documentation in lieu of environmental changes. If approved, counties shall submit plans for approval to the Secretary of State's office on overcoming these conditions through one of the two stated processes.
 - b) In addition to physical environmental changes, counties shall create a second (or backup) copy of the WinEDS database that is created immediately after the point of memory card downloads. The backup copy shall be stored on closed CD Media and documented as matching the master database. This process shall be observed by two election staff members. Chain of custody documents shall be generated for the media, and the media shall be sealed with at least two tamper evident seals and stored in a sealed or lockable transfer case that is stored in a limited access area. AFTER the close of polls, the designated election official shall load the sealed copy of the database onto the server and proceed with uploading memory cards after documenting the loading of the backup master database onto the system. After loading the sealed database copy, the county shall re-secure the database with seals (updating necessary logs) in the limited access location.
 - c) Additionally, to overcome deficiencies in security and auditing of the system, the county will be required to perform increased Election Night and Post Election Audits for this system. All post-election audit data shall process a hand count of paper ballots which shall match the totals report from the specific device, as well as the totals for the WinEDS database. Counties shall prepare for this event with one of two methods:

Option #1 – Prepare for the upload of memory cartridges as normal. Print necessary zero report. Upon uploading each individual memory card, print a summary report showing the change in totals from the upload of the memory card. Label the report to match the name/number of the memory card uploaded. Continue to upload memory cards and print totals reports to match. When auditing a specific device, use the difference between the report totals for the memory card selected for the audit and the totals from the immediately preceding memory card report to calculate vote totals generated by the WinEDS software.

When memory cards are delivered to the county for upload, the machine generated report shall be delivered for inspection as well. On election night, when the summary report indicated above is created, the difference totals (delta report) are immediately compared to the totals from the report generated by the device at the polling place. If the reports match, the public is ensured that the totals from the polling place match the totals from the county server. If the totals are different, the county is to report the situation (on election night) to the Secretary of State for audit, security and remedy procedures.

During the post election audit process, the totals of the paper record for the specific device are to be hand counted and verified against the electronic record for the device. The canvass board shall report the verification of three totals to match – the paper record of the device, the totals of the

electronic vote on the device, and the totals in the central count server; OR

Option #2 – Prepare for the upload of memory cartridges by creating one master default database (containing all memory cards/cartridges). Create individual databases to contain values (upload data) for each separate memory card (or in some instances by batch of ballots – see condition #4b under Central Count devices. Upload memory card/cartridges into master database, and into the specific database created for that memory card (two separate uploads). This process must happen on Election Night and with observation by at least two people. Election summary reports shall be printed from each individual database and manually added together. The totals from the individual databases must match the master database before proceeding. Upon verification that the master and individual databases match, the county can then use the individual reports to conduct a hand count of the paper ballot (or paper record) generated by the device to show that the WinEDS totals match. The verification of the separate upload databases verify that the database totals match the field totals on each memory card device, as was designed after the point of Logic and Accuracy testing took place.

2) Ballot-On-Demand Restriction.

a) Counties will be required to produce certain reports identified in C.R.S. 1-7-509 using an external process which will include at a minimum exporting result from the WinEDS software for processing by other methods.

b) Operators of the system shall also be required to maintain logs indicating use of the report printing functions of the software, and detailed information to changes of the system including hardware changes which shall include: insert removable media, remove removable media, modify system hardware drivers, modify system physical hardware, and any other system property changes made by either judges or other trusted staff. Logs shall be maintained physically in a file outside or separate from the database, which is NOT accessible for review and/or modification by user/operator accounts on the system, but that is readily accessible to election officials or other interested party.

3) Trusted Build Protection.

Applies to WinEDS software and custom components of SQL server as applicable. Refer to Global Condition #5a for ensuring integrity of trusted build.

4) Audit Trail Information:

Counties will be required to produce certain reports identified in C.R.S. 1-7-509 using an external process which will include at a minimum exporting result from the WinEDS software for processing by other methods.

5) Performance Deficiencies.

Due to failures in performance, counties shall allow extra time for downloads and uploads of memory card devices. This may impact programming, testing and use of the system on election night. Counties shall ensure trusted staff is properly trained on this issue and accommodating the allowable time required for programming memory devices.

6) Provisional Ballots.

The software is not capable of processing provisional ballots internally to accept federal and state only questions. A procedure outside of the voting system will be required. Additionally, the abstracts and reports created by the software do not meet the requirements of rule 41.6.3(g) and users of the system will be required to generate an abstract outside of the voting system.

7) Election Database Creation and Testing.

The system relies heavily on an external program called BPS which typically is used for importing the ballot setup process into WinEDS. Since this program is to be considered non-trusted and is not third party as it is made by the voting system manufacturer, the program shall only be able to receive data from WinEDS. WinEDS shall not be used to import data from BPS. Additional testing will therefore be required by counties for both electronic and paper ballots to ensure all voting positions are working as designed prior to each election. This shall include ordering a complete set of at least 5 ballots of each style that contain the prescribed design for that election. County officials shall mark each possible position for each race on the ballots. All ballots shall be tested internally prior to the public logic and accuracy test. The goal of the pretest is to ensure that all available positions are counting when marked correctly.

Precinct Count Scanner Conditions (Insight/Insight Plus):

1) Intrusion Seals for Protection of Trusted Build Firmware.

Device has no provision of Trusted Build verification once installed. Counties will be required to maintain constant seals on voting device memory slot, back panel, and other entry points as indicated by the Secretary of State. Refer to Global Condition #5a for ensuring integrity of trusted build.

2) External Battery Backup (UPS) Devices Required.

Insufficient internal power reserves to sustain minimum 3 hour continuous operation. Counties shall purchase and use an external power supply that meets or exceeds the vendor's recommendation for the component.

3) Device Security Accessibility.

- a) Device level administrative functions requiring access involving the use of keys, memory cards, and passwords must be restricted to single person entry with detailed logs.
- b) County use of voting system will require use of WinEDS Software to modify the "administrator" password on the voting device.

4) Ballot/Race Conditions Simulation.

Additional County testing shall be required to accommodate ballots with conditions from each election. This shall include ordering a complete set of at least 5 ballots of each style that contain the prescribed design for that election. County officials shall mark each possible position for each race on the ballots. All ballots shall be tested internally prior to the public logic and accuracy test. The goal of the pretest is to ensure that all available positions are counting when marked correctly.

5) Audit Trail Information:

- a) Operators of the system shall also be required to maintain logs indicating use of the administrator functions of the device by either judges or other trusted staff.
- b) Counties will be required to produce certain reports identified in C.R.S. 1-7-509 using an external process which will include at a minimum exporting result from the WinEDS software for processing by other methods.
- c) Counties will be required to perform additional post election audit functions for the device to

accommodate for security deficiencies. In an effort to increase confidence in the recording of votes by the device, the post-election audit shall include the verification of the hand count of paper ballots to match the totals generated from the WinEDS software as indicated in Software condition #1b.

6) Voting Secrecy.

Insufficient privacy of ballot was detected using secrecy sleeve. Election administrators must ensure system secrecy sleeve (from Sequoia) is used for ballots up to 14". For longer ballots, the counties shall create a secrecy sleeve to accommodate the deficiency and submit design form to Secretary of State for approval.

Central Count Scanner Conditions (400-C):

1) Intrusion Seals for Protection of Trusted Build Firmware.

Device has no provision of Trusted Build verification once installed. Counties will be required to maintain constant seals on voting device memory slot, back panel, and other entry points as indicated. Refer to Global Condition #5a for ensuring integrity of trusted build.

2) System/Database/Network Security Hardening.

Because the voting system operates in a non-restricted system configuration containing open file system access to locate, copy, open and overwrite without detection, election vote content database files outside of election management system application by third-party tools, counties will be required to modify their physical environmental conditions, or work with current Sequoia documentation (not currently tested) and request variance from the Secretary of State to use Sequoia hardening documentation in lieu of environmental changes. If approved, counties shall submit plans for approval to the Secretary of State's office on overcoming these conditions through one of the two stated processes.

3) External Battery backup (UPS) Devices Required.

Insufficient internal power reserves to sustain minimum 3 hour continuous operation. Counties shall purchase and use an external power supply that meets or exceeds the vendor's recommendation for the component.

4) Audit Trail Information:

a) Judges shall be required to include device serial number on all reports regarding use of the device. Additionally, the county shall include the device serial number on applicable reports from the device.

b) Counties will be required to perform additional post election audit functions for the device to accommodate for security deficiencies. In an effort to increase confidence in the recording of votes by the device, the post-election audit shall include a hand count of at least the following amounts of ballots:

Considering the closest race in the election, if the difference between the top two candidates for the race is:

- 10% or greater, then hand count 60 ballots for every 10,000 cast;
- 9.00% - 9.99%, then hand count 65 ballots for every 10,000 cast;
- 8.00% - 8.99%, then hand count 70 ballots for every 10,000 cast;
- 7.00% - 7.99%, then hand count 80 ballots for every 10,000 cast;

6.00% - 6.99%, then hand count 95 ballots for every 10,000 cast;
5.00% - 5.99%, then hand count 115 ballots for every 10,000 cast;
4.00% - 4.99%, then hand count 140 ballots for every 10,000 cast;
3.00% - 3.99%, then hand count 185 ballots for every 10,000 cast;
2.00% - 2.99%, then hand count 275 ballots for every 10,000 cast;
1.00% - 1.99%, then hand count 550 ballots for every 10,000 cast;
0.01% - 0.99%, then hand count 1200 ballots for every 10,000 cast.

The verification of the hand count of paper ballots shall match the totals generated from the WinEDS software as indicated in Software condition #1c. Counties shall load only the master database from the secured storage location for processing the post election audit ballots as indicated in Software Condition #1b. Counties shall prepare database and batches of ballots prior to scanning into system (for election results) to accurately generate reports in batch sizes as necessary for the audit. If the county or system is not capable of accommodating the requirement of batch size after the outcome of the election is revealed, the highest percentage of ballots shall be used for the audit process.

c) Additional County testing shall be required to accommodate ballots with conditions listed. This shall include ordering a complete set of at least 5 ballots of each style that contain the prescribed design for that election. County officials shall mark each possible position for each race on the ballots. All ballots shall be tested internally prior to the public logic and accuracy test. The goal of the pretest is to ensure that all available positions are counting when marked correctly.

6) Device Security Accessibility.

Device level administrative functions requiring access involving the use of keys, memory cards, and passwords must be restricted to single person entry with detailed logs.

DRE Conditions (Edge II):

1) External Battery Backup (UPS) Devices Required.

Insufficient internal power reserves to sustain minimum 3 hour continuous operation. Counties shall purchase and use an external power supply that meets or exceeds the vendor's recommendation for the component.

2) Intrusion Seals for Protection of Trusted Build Firmware.

Device has no provision of Trusted Build verification once installed. Counties will be required to maintain constant seals on voting device memory slot, back panel, and other entry points as indicated by the Secretary of State. Refer to Global Condition #5a for ensuring integrity of trusted build.

3) Ballot/Race Conditions Simulation.

Additional County testing shall be required to accommodate ballots with conditions listed. This shall include ordering a complete set of at least 5 ballots of each style that contain the prescribed design for that election. County officials shall mark each possible position for each race on the ballots. All ballots shall be tested internally prior to the public logic and accuracy test. The goal of the pretest is to ensure that all available positions are counting when marked correctly. All ballots in this detail shall be "marked" using the DRE device as applicable for similar testing.

4) V-VPAT Paper Record shall be handled per Rule 11.6.

Prescribed paper record is of the thermal type and requires special storage conditions to avoid legibility degradation. Counties shall follow the requirements for handling according to Secretary of State Rule 11 and 43.

5) V-VPAT Security.

The V-VPAT device provides no assurance that it cannot accommodate other devices, and/or the device is a standard communication port. This connection between the V-VPAT printer and the DRE unit shall be secured with tamper evident seals with proper chain of custody documentation to prevent and detect tampering.

6) Accessible Distances.

Operators of the system shall be required to provide an accessible solution by operating the device on a separate table. The manufacturer's stand does not meet accessible reaches as outlined in 1-5-704. Counties shall be educated on these measurements and ensuring that the table top solution complies with the requirements.

7) Accessible Operation.

Due to the inability for the voter to pause and resume the audio text, election judges shall provide instructions specific to this fact to the voters and operations for repeating the text if text was missed, which shall include details on navigating forward and backwards through the system prompts.

8) Confusing Instructions to Voters.

Due to the complicated messaging provided to voters during the V-VPAT review process, the use of the device shall require election administrators to change the wording of the review screen to properly indicate to voters that a review of the ballot is taking place.

9) Device Security Accessibility.

a) The "override.ini" file must not be used with the voting system. The file is not a VSTL-approved file, and poses potential for security threat (denial of service in particular).

b) Devices deployed in Colorado shall require a "lockable" activate button. The button shall be protected with a tamper evident seal. This form of activation shall not be used in the voting environment. Only activation by voter access card using the Card Activator as tested.

c) Device level administrative functions requiring access involving the use of keys, memory cards, and passwords must be restricted to single person entry with detailed logs.

DRE Conditions (Edge II Plus):

1) External Battery Backup (UPS) Devices Required.

Insufficient internal power reserves to sustain minimum 3 hour continuous operation. Counties shall purchase and use an external power supply that meets or exceeds the vendor's recommendation for the component.

2) Intrusion Seals for Protection of Trusted Build Firmware.

Device has no provision of Trusted Build verification once installed. Counties will be required to maintain constant seals on voting device memory slot, back panel, and other entry points as indicated by

the Secretary of State. Refer to Global Condition #5a for ensuring integrity of trusted build.

3) Ballot/Race Conditions Simulation.

Additional County testing shall be required to accommodate ballots with conditions listed. This shall include ordering a complete set of at least 5 ballots of each style that contain the prescribed design for that election. County officials shall mark each possible position for each race on the ballots. All ballots shall be tested internally prior to the public logic and accuracy test. The goal of the pretest is to ensure that all available positions are counting when marked correctly. All ballots in this detail shall be "marked" using the DRE device as applicable for similar testing.

4) V-VPAT Paper Record shall be handled per Rule 11.6.

- a) Prescribed paper record is of the thermal type and requires special storage conditions to avoid legibility degradation. Counties shall follow the requirements for handling according to Secretary of State Rule 11 and 43.
- b) Election judges are required to perform the "Printer Test" in between paper changes and verify with one additional judge that the paper has been loaded correctly and is printing according to design which ensures that all machines will have paper records for each vote cast.

5) V-VPAT Security.

The V-VPAT device provides no assurance that it cannot accommodate other devices, and/or the device is a standard communication port. This connection between the V-VPAT printer and the DRE unit shall be secured with tamper evident seals with proper chain of custody documentation to prevent and detect tampering.

6) Accessible Distances.

Operators of the system shall be required to provide an accessible solution by operating the device on a separate table. The manufacturer's stand does not meet accessible reaches as outlined in 1-5-704. Counties shall be educated on these measurements and ensuring that the table top solution complies with the requirements.

7) Accessible Operation.

Due to the inability for the voter to pause and resume the audio text, election judges shall provide instructions specific to this fact to the voters and operations for repeating the text if text was missed, which shall include details on navigating forward and backwards through the system prompts.

8) Audit Trail Information:

- a) Counties will be required to produce certain reports identified in C.R.S. 1-7-509 using an external process which will include at a minimum exporting result from the WinEDS software for processing by other methods.
- b) Counties will be required to perform additional post election audit functions for the device to accommodate for security deficiencies. In an effort to increase confidence in the recording of votes by the device, the post-election audit shall include the verification of the hand count of paper records to match the totals generated from the WinEDS software as indicated in Software Condition #1b.

9) Confusing Instructions to Voters.

Due to the complicated messaging provided to voters during the V-VPAT review process, the use of the device shall require election administrators to change the wording of the review screen to properly indicate to voters that a review of the ballot is taking place.

10) Device Security Accessibility.

- a) The “override.ini” file must not be used since it is not a VSTL-approved file, and since editing the contents of this file can cause the Edge II Plus to be inoperable.
- b) Devices deployed in Colorado shall require a “lockable” activate button. The voting system vendor must provide schematics and assembly drawings of the button prior to installation. The button shall be protected with a tamper evident seal at all times. This form of activation shall not be used in the voting environment. Only activation by voter access card using the HAAT 50 as tested.
- c) Device level administrative functions requiring access involving the use of keys, memory cards, and passwords must be restricted to single person entry with detailed logs.

Insight Memory Pack Receiver Conditions (2.1.5):

1) Intrusion Seals for Protection of Trusted Build Firmware.

Device has no provision of Trusted Build verification once installed. Counties will be required to maintain constant seals on memory cartridge & memory pack reader/burner and will require additional seals for protection against entry points as indicated by the Secretary of State.

Requirements apply to physical MPR and all data cartridges used by the county. Refer to Global Condition #5a for ensuring integrity of trusted build.

Card Activator Conditions (Version 5.0.31):

1) Intrusion Seals for Protection of Trusted Build Firmware.

Device has no provision of Trusted Build verification once installed. Counties will be required to maintain constant seals on device and will require additional seals for protection against entry points as indicated by the Secretary of State. Refer to Global Condition #5a for ensuring integrity of trusted build.

HAAT Model 50 Conditions (Version 2.1.18):

1) Intrusion Seals for Protection of Trusted Build Firmware.

Device has no provision of Trusted Build verification once installed. Counties will be required to maintain constant seals on device and will require additional seals for protection against entry points as indicated by the Secretary of State. Refer to Global Condition #5a for ensuring integrity of trusted build.

**2007-CDOS-SEQ-001-0403
PROJECT OVERVIEW BINDER “A.2”**

COMMENTS



Test Board Comments

The testing board has unveiled a known reality that no computer system is perfect. Additionally, we have discovered and documented that no system can currently meet the requirements of Rule 45 as applied in its strictest sense. Where possible, the testing board attempted to overcome these deficiencies in the form of “conditions for use” of the system – procedural workarounds.

The testing board recognizes that the conditions created are in essence a “last resort” workaround to accommodate requirements that do not meet specific sections of Colorado Revised Statutes 1-5-615. The preference of the testing board would be to have the specific deficiencies addressed with a system solution as required. Given the ability to mitigate deficiencies with procedural workarounds (C.R.S. 1-5-621), the testing board presents conditional use scenarios in the “**Conditions**” section that are directly tied to the recommendation status. Being that many workarounds address the security, auditability and availability of the system component, the testing board would firmly reject any option which removes, replaces or diminishes the conditional requirement and still allow the system to be used and recommended for certification. Any “Y” value in the **Recommendation** table would change to a “N” value with any change to the conditions.

These conditional procedures rely heavily on proper execution by county administrators and/or election judges. While we have faith that these dedicated workers will attempt to perform their duties to the best of their abilities, a majority of the conditions involve a human element which may or may not produce the acceptable outcome. This single factor alone causes concern that a security issue may not be resolvable in a post-election scenario.

Finally, it is of value to point out that the conditions that address security specific events are only addressing the attack scenario of a change in vote totals (refer to Cyber Security Report). The essence of the workaround in this case is to ensure that the vote totals calculated electronically are a match to the paper records. This requires absolute assurance that all paper records exist and are auditable for a successful outcome and high confidence in the report of votes by any given county.

**2007-CDOS-SEQ-001-0403
PROJECT OVERVIEW BINDER “A.2”**

AUDIT REPORTS

STATE OF COLORADO
Department of State

1700 Broadway, Suite 270
 Denver, CO 80290



Mike Coffman
 Secretary of State

Holly Lowder
 Director, Elections

The Testing Board delivered the project in the form of electronic and paper files to Paul Kraft of Freeman, Kraft, McGregor, Inc. for review under the independent audit process. The results of the audit are included herein and attached as part of this section.

The auditor provided details to the testing board on a test by test basis for review by the testing board. The testing board review and outcome fell into two categories. First, many of the items mentioned by the auditor are addressed by the testing board by addressing documentation, updating test status, or firming the position of the testing board. The specific test numbers that fall into this category can be found in the addendum binders for the voting system. The amended test numbers based on auditor comments are:

AC1-P3	101
AC1-P3	102
AC2-P3	203
AC2-P3	205
AC3-P3	302
AC3-P3	310
AC4-P3	405
AC4-P3	406
BA1-P3	107
BA1-P3	111
BA1-P3	114
BA2-P3	208
BA2-P3	211
BE1-P3	107
BE1-P3	108
BE1-P3	110
CA4-P3	411
CA4-P3	416
CA4-P3	417
CA4-P3	421
CC3-P3	333
CD4-P3	401
CE1-P3	104

CF3-P3	307
CF4-P3	403
CG2-P3	208
CG4-P3	411
DB1-P3	114
DB2-P3	219
DE1-P3	106
DE3-P3	305
DF1-P3	106
DF1-P3	107
DF1-P3	108
DF1-P3	122
DG1-P3	118
DG1-P3	119
DG1-P3	122
DG1-P3	128
DG1-P3	131
DG1-P3	132
DG1-P3	137
DH2-P3	210
DH2-P3	214

The other category of items are issues where the testing board feels that the understanding of the requirements is correct, and have provided additional information to the auditor on the reasoning behind either the interpretation or application of the test. Each category is identified below:

Auditor Comment for test numbers:

CA1-P3	113
CA1-P3	121
CA2-P3	204
CA2-P3	213

CB3-P3	310
CB3-P3	316
EA1-P3	101
EA2-P3	201
EA2-P3	301
EA3-P3	301

Category 2 - Questionable interpretation of the requirement - Is the requirement for authorized users to preserve the system or for the system to provide user accounts with differing classes authorization?

Colorado Testing Board Response: The testing board removed all external processes and procedures from the testing environment when evaluating the systems. The evaluation process is designed to flag items that require additional county procedures based on deficiencies in testing.

The bottom line is yes. The testing board evaluated the requirement with the intent that the voting device needed some steps for “authorization” of user. In the specific systems addressed with the requirements, the device merely required a power-on step allowing any user to activate and operate the equipment as required. At a minimum, the Testing Board evaluated these requirements with the approach that some form of authentication verifying the appropriate user is taking action. This could be in the form of a password, unique activation card, or uniquely identified key for the device.

Auditor Comment for test numbers:

CC3-P3	331
CC3-P3	332
CD3-P3	302
CD3-P3	303
CD3-P3	304
CD3-P3	305

Category 2 - Questionable interpretation of the requirement - Is a central tabulator a "voting device"

Colorado Testing Board Response: Colorado Revised Statutes Title 1, Article 1, Section 104 provides this definition of a voting device: (50) "Vote recorder" or "voting device" means any apparatus that the elector uses to record votes by marking a ballot card and that subsequently counts the votes by electronic tabulating equipment or records the votes electronically on a paper tape within the apparatus and simultaneously on an electronic tabulation device. Through the interpretation of the plain text language, particularly the inclusive language that the device “subsequently counts the votes” qualified the central count device as a voting device.

Auditor Comment for test numbers:

CA4-P3	401
CA4-P3	414
CA4-P3	429
DB2-P3	205
DB3-P3	304
DB3-P3	306
DB3-P3	321

Category 7 - The requirement is not found in the Statute or Rule cited.

Colorado Testing Board Response: Although each specific requirement is not listed in the rule and/or statute for Colorado law, the requirement is a compilation of understanding voting equipment use and reporting needs for proper Colorado Election Processing. Additionally, rules 45.3.2, 45.6.2.2.1, and 45.6.2.3.15 provides authorization for the Secretary of State to request additional tests and procedures for certification as necessary.

After additional review, the testing board believes its' within reason to request testing on the two specific tests identified.

Auditor Comment for test numbers:

CG1-P3	107
CG1-P3	108
CG1-P3	109
CG2-P3	205
CG2-P3	206
CG2-P3	210
CG2-P3	214
CG3-P3	301
CG3-P3	303
CG3-P3	304
CG3-P3	306
CG3-P3	308

Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct/400-C device function?

Colorado Testing Board Response: Because of the unique and varied Colorado County configurations, there are many instances where counties do not have the election management component of the voting system. By identifying these tests as being unable to produce the official Colorado Abstract, the Testing Board would be able to require one or two outputs as a result. Either the counties would be restricted from purchasing the components without the software, or the counties would be informed that the abstract must come from an external solution as the device is deficient in producing the necessary reports on its' own.

Auditor Comment for test numbers:

CC1-P3	118
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Category 5 - Observations do not support the Status - Incorrectly recording input for write-ins does not seem to satisfy the requirement for providing a method for write-ins.

Colorado Testing Board Response: The testing board applied a logic to this event that was similar for what was used on other test items. In this instance the availability for a write-in vote is present, but records incorrect information. The severity of that type of issue makes the ability of the write-in on the device nearly worthless. Additionally, because Colorado has very detailed descriptions regarding the qualification of a vote that is written in, the possibility of this error could cause a resolution board to not correctly add a write-in vote when voting in Spanish.

Auditor Comment for test numbers:

AC1-P3	111
AC2-P3	209
AC3-P3	301
CG1-P3	105
CG2-P3	204

Category 2 - Questionable interpretation of the requirement - If early voted ballots or absentees were scanned in precincts they would be combined; or does the rule require accumulation of results between devices within the precinct?

Colorado Testing Board Response: The testing board evaluated this requirement at a device level. In that environment, the device would use separate memory cards to process early and absentee ballots, or in some instances add results between like devices at a singular location. Using this model there is no method at the device to combine the results of the two memory cards as required.

Auditor Comment for test numbers:

DG1-P3	140
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Category 2 - Questionable interpretation of the requirement - The rule seems to distinguish between "push buttons" and "switches." Are they equivalent?

Colorado Testing Board Response: The specific requirement states that accessible devices shall contain: push buttons, dials, wheels, keypads, and/or touch screens. Other devices such as switches, sip and puff devices, and/or additional blink control devices are not required until after March 31, 2008. The testing board evaluated the Edge II plus as a PASS, and the Edge II as not able to test due to vendor programming issues which we feel is an accurate interpretation of the requirement.

Auditor Comment for test numbers:

BA1-P3	112
BA2-P3	202
BA3-P3	312

Category 2 - Questionable interpretation of the requirement - The Database Management System is in WinEDS not in the listed Device.

Colorado Testing Board Response: This statement is mostly true (the 400-c does have a database management system). The testing board felt strongly that because the device does not meet the requirements of having separate user access and the impact of this access breach on each device that it should be noted in these tests.

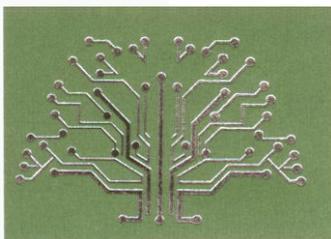
Auditor Comment for test numbers:

BA3-P3	313
BA3-P3	314

Category 2 - Questionable interpretation of the requirement - Requirement is no use of blank or empty passwords - Observation is that only the Windows environment handles the passwords

Colorado Testing Board Response: The Testing Board has noted that the Windows environment does have the ability to meet these requirements, the system was not prepared by the vendor to accommodate this requirement and the system was unable to be tested as presented to meet this requirement.

The testing board has resubmitted the addendum package back to Mr. Kraft and associates for review of addendum documents and reconsideration of the items based on this document created by the testing board.



FREEMAN, CRAFT, MCGREGOR GROUP

Independent Audit of
Colorado Secretary of
State's 2007 Certification
Process for:

Sequoia Voting Systems,
Inc. WinEDS 3.1.074

Colorado Certification Number:
2007-CDOS-SEQ-001-0403

Prepared October 24, 2007

Introduction

The Colorado Secretary of State's (CDOS) process for certifying voting systems requires an Independent Audit of Certification Procedures and Outcome (audit) for each voting system tested. This report documents the audit of the procedures and outcome from the certification test of the WinEDS 3.1.074 voting system produced by Sequoia Voting Systems, Inc.

Objective

The objective of this audit is to provide CDOS with independent information to verify the performance and accuracy of the CDOS Testing Board and their recommendations for corrective actions or reevaluations which should take place prior to making a decision on the certification of a voting system. This audit is not intended to provide any assurance on any topic to third parties. This audit does not express any opinion on any certification decision made by CDOS. The use of this report by other individuals or organizations for any other purpose may lead the user to erroneous conclusions.

Scope

The scope of this audit is to review the documentation collected and generated by the CDOS Testing Board to determine if the documentation reasonably supports the recommendation on the certification issued by the Testing Board. The auditors are to determine if the records reflect that:

- a. the CDOS Testing Board followed procedures for evaluating test requirements;
- b. the CDOS Testing Board followed procedures for executing test requirements;
- c. the CDOS Testing Board followed procedures for documenting certification testing;
- d. the documentation provided to the auditor supports the outcome of these tests.

Scope Limitation

There were 879 test records in the Phase II Document Review performed by the CDOS Testing Board. The individual test records describe the requirement for which compliance is being tested, reference the document which was reviewed and assign status codes of Pass, Pass Conditional, Fail, Suspend and Not Applicable for each test. However, many of the test reports do not include the Rule or Statutory citation for the requirement. There are no references to relevant sections or pages within the documents

being reviewed, and the specific reasons for the status assigned by the CDOS Testing Board are not provided as part of the test records.

Accordingly, the auditors were unable to issue any opinion whether the CDOS Testing Board's Phase II Document Review tested for all documentation required by Colorado Statutes and the Election Rules of the Colorado Secretary of State, and whether or not the status assigned on each test record is appropriate.

Methodology

The Colorado Statutes and the Election Rules of The Colorado Secretary of State were compared to an inventory of test requirements and Test Log Records to determine if any requirements had been omitted from the testing process.

A total of 1130 Testing Log Records resulted from the Phase III Functional Testing. Each record was reviewed to determine if, in the auditor's opinion, the statements of requirements, purpose, test procedures, observations, and findings support the status for each test as assigned by the CDOS Testing Board.

Supplementary documentation, including video records, photographs, copies of ballots, copies of test result printouts and copies of documentation were used as reference materials to support the review of the Testing Log Records.

Deliverables

Deliverables included in this report are:

A summary statement which highlights issues and inconsistencies in the test records produced by the CDOS Testing Board during their evaluation of the voting system. See the "Summary Statement" section beginning on Page 3 of this report.

Specific statements on any items where the Test Log Records do not reflect that the Testing Board achieved the goals described in items a through c of the scope section above, or where the documentation provided to the auditor does not support the outcome of the test. The specific statements regarding individual items are found in the Microsoft Excel file "Sequoia - Audited Final test Status.xls" which accompanies this report. Each finding in the file is assigned a "Category." See the "Detailed Findings" section beginning on Page 3 of this report for a discussion of the categories of findings.

Specific statements regarding any recommendations for items to be reexamined by the CDOS Testing Board. See the "Recommendations" section, beginning on Page 5 of this report.

Any additional reports or statements the auditors feel necessary in their review as dictated by the scope of this audit engagement. See the “Additional Recommendations” section, beginning on Page 6 of this report.

Summary Statement

Based upon the review of test records, it appears that the CDOS Testing Board followed the procedures for evaluating requirements, followed the procedures for executing testing requirements, and followed the procedures for documenting those tests.

The auditors identified seven requirements in Rule 45 that did not appear to be covered in the Testing Log Records used in the Phase III Functional Testing. These requirements are identified in the Detailed Findings section of this report.

The auditors identified a number of test records where, in the auditors’ opinion, the statements of requirements, purpose, test procedures, observations, and findings do not support the status for each test as assigned by the CDOS Testing Board. The auditors’ findings regarding these test records are discussed in the Detailed Findings section of this report and itemized in the Microsoft Excel file “Sequoia - Audited Final test Status.xls”

In the auditors’ opinion, the test records provided by CDOS support the Preliminary Recommendation of the CDOS Testing Board, which states that the system should not be certified.

Detailed Findings

There are seven “Rule 45” requirements that the auditors could not find in the Phase III test records. The CDOS Testing Board may have determined compliance with these requirements in their Phase II review of documentation. However, none of these are specifically identified within Rule 45 as documentation requirements. The seven requirements are:

- 1) Section 45.5.2.3.2 – Operating and Non-Operating ranges for temperature and humidity.
- 2) Section 45.5.2.3.16 (a) – Processing Accuracy
- 3) Section 45.5.2.3.16 (b) – Probability of error free data retention in memory devices.
- 4) Section 45.5.2.3.18 – Requirement to meet or exceed Mil-HDBJ-454 “Standard General Requirements for Electronic Equipment.”
- 5) Section 45.5.2.3.22 – Requirement for estimated useful life of at least eight (8) years.
- 6) Section 45.5.2.9.9 – Requirement that the V-VPAT paper record shall be “...sturdy, clean, and of sufficient durability to be used for this purpose.”

- 7) Section 45.6.2.3.5 – Requirement for each component of the voting system to contain provisions for verification of correct function and, whether operation of the component is dependent upon instructions specific to that election.

The auditors have issued a finding for one hundred and eighteen records in the Phase III test log. These findings are itemized in the Microsoft Excel file “Sequoia - Audited Final test Status.xls.” Within the file, each record in the Phase III test log is assigned a row and referenced by the CDOS test number shown in Columns “B” and “C.” The Status for each test, as assigned by the CDOS Testing Board, is shown in Column “A”. The auditors’ recommended status is shown in Column “I.” As described below, the auditors assigned a “Category” to each finding. The Category assigned to each finding, as well as a comment regarding the basis of the finding, is provided in Column “J.” Each row in the file is color coded as follows:

Green – Indicates that the statements of requirements, purpose, test procedures, observations, and findings in the test record support the status the test is assigned by the CDOS Testing Board.

Yellow – Indicates that the auditors agreed with the status for the test as assigned by the CDOS Testing Board, but found an issue in the test record’s statements of requirements, purpose, test procedures, observations, and findings, which needs to be addressed.

Pink – Indicates that the auditor’s opinion is that the statements of requirements, purpose, test procedures, observations, and findings do not support the status the test as assigned by the Testing Board.

The Categories assigned to findings are as follows:

Category 1 – The CDOS Testing Board has assigned a status of “Fail” to the test. The review of the observations and findings in the test record shows that the Testing Board was not able to complete the test. Based upon the auditors’ understanding of the criteria used to assign status to each test, it is the auditors’ opinion that a status of “Suspend” would be appropriate.

Category 2 – The auditors’ opinion is that the CDOS Testing Board has executed tests or assigned a status to a test based upon a questionable interpretation or application of a requirement.

Category 3 – The auditors’ opinion is that a reference to supporting documentation is insufficient to support the status which the CDOS Testing Board assigned to a test. There are six category 3 findings. In each of the six, the Testing Bard made reference to a voluminous document with no specific information regarding where the supporting information is located within that document.

Category 4 – The auditors’ opinion is that the descriptions provided in the test record by the CDOS Testing Board lacks sufficient information to support the status assigned to the test.

Category 5 – The auditors’ opinion is that the descriptions provided in the test record by the CDOS Testing Board support a different status from the status assigned to the test. .

Category 6 – The auditors found that the status shown by the CDOS Testing Board in Column 1 of the Sequoia - Audited Final test Status.xls file and that found in the test log record are different.

Category 7 – The auditors found that a requirement cited by the CDOS Testing Board does not appear to exist in Rule or Statute. For all five findings in this category, the test record shows sections 45.6.2.2.1 which provides for “additional testing procedures as determined by the Secretary of State and 45.6.2.3.15 which provides that “Additional tests and procedures may be requested at the discretion of the Secretary of State”

Recommendations

For the seven “Rule 45” requirements the auditors could not find in the Phase III test records, it is recommended that the CDOS Testing Board take steps to determine if records exist to provide evidence that they have determined that the system does or does not comply with these requirements. If no such record exists then it is recommended that they conduct additional procedures as necessary to determine compliance with these requirements.

For the Category 1 findings, it is recommended that the CDOS Testing Board consider assigning a status of “Suspend” and document additional test steps required to convert the “Suspend” status to “Pass” or “Fail.”

For the Category 2 findings, it is recommended that the CDOS Testing Board review the auditors’ comments in Column “J” of the Microsoft Excel file “Sequoia - Audited Final test Status.xls and reconsider the Testing Board’s previous interpretation or application of the requirements. If they determine that a different interpretation or application is appropriate, then it is recommended that they conduct additional procedures as necessary to determine compliance under the revised interpretation or application.

For the Category 3 findings, it is recommended that the CDOS Testing Board provide page and line number references to supporting documentation and describe the specific content of the document or specific content that is missing which supports the status assigned to the test.

For the Category 4 findings, it is recommended that the CDOS Testing Board revisit the test records and develop more content to support the status assigned to the test or consider if another status might be more appropriate.

For the Category 5 findings, it is recommended that the CDOS Testing Board revisit the test records and determine whether the descriptions cited in the test record or the assignment of status was made in error.

For the Category 6 findings, it is recommended that the CDOS Testing Board resolve the conflict between the two records.

For the Category 7 findings, it is recommended that the CDOS Testing Board provide documentation to cite the authority that determined these additional procedures and tests to be necessary.

Additional Recommendations

It is recommended that the CDOS Testing Board develop structured test cases designed to test compliance with a large number of requirements so as to reduce redundant operations and make testing more efficient.

It is recommended that the CDOS Testing Board reduce the number of pages used for the testing record. Requirements within a given test case could be documented on a single page rather than a single sheet for each requirement.

It is recommended that the CDOS Testing Board edit video files down to specific sections of video which support the findings. Videos which show long periods of inconsequential events may be valuable as a record of security and access to the testing room, but should be excluded from the video files used to support the CDOS Testing Board's assignments of status to tests.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
02 - Pass Conditional	AA6-P1	601	TRUE	TRUE	TRUE	The voting system provider shall establish an escrow account pursuant to State procurement processes to compensate the Secretary of State for necessary outside costs associated with the testing of the system.	OTHER	Conditional Pass	
01 - Pass	AA6-P1	602	TRUE	TRUE	TRUE	The voting system provider shall provide the same class of workstation and/or server for testing the voting system as the normal production environment for the State of Colorado.	OTHER	Pass	
01 - Pass	AA6-P1	603	TRUE	TRUE	TRUE	The voting system provider shall submit for testing the specific system configuration that shall be offered to jurisdictions including the components with which the voting system provider recommends that the system be used.	OTHER	Pass	
01 - Pass	AA6-P1	604	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains: <ul style="list-style-type: none"> <input type="checkbox"/> Name address and contact information of vendor submitting application. 	OTHER	Pass	
01 - Pass	AA6-P1	605	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains: <ul style="list-style-type: none"> <input type="checkbox"/> Make Model and Description of the Voting System. 	OTHER	Pass	
01 - Pass	AA6-P1	606	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains: <ul style="list-style-type: none"> <input type="checkbox"/> All Applicable Firmware and version release numbers. 	OTHER	Pass	
01 - Pass	AA6-P1	607	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains the following documents: <ul style="list-style-type: none"> <input type="checkbox"/> Administrator Manual <input type="checkbox"/> Operator Manual <input type="checkbox"/> Maintenance Manual <input type="checkbox"/> Training Manuals <input type="checkbox"/> Technical Specs. <input type="checkbox"/> Operational Specs. <input type="checkbox"/> Photo or Promo Info. <input type="checkbox"/> Schematics. 	OTHER	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AA6-P1	608	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains the following documents: <ul style="list-style-type: none"> <input type="checkbox"/> Copy of application on CD <input type="checkbox"/> Instructions for Install and operation. 	OTHER	Pass	
01 - Pass	AA6-P1	609	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains: <ul style="list-style-type: none"> <input type="checkbox"/> Indication if the item is: New, Used, or Refurbished 	OTHER	Pass	
01 - Pass	AA6-P1	610	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains the following VSTL/EAC testing documents: <ul style="list-style-type: none"> <input type="checkbox"/> Final reports for all VSTL tests. <input type="checkbox"/> VSTL Technical Data Package <input type="checkbox"/> VSTL Test Logs 	OTHER	Pass	
01 - Pass	AA6-P1	611	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains: <ul style="list-style-type: none"> <input type="checkbox"/> A NASED or EAC Qualification Number 	OTHER	Pass	
01 - Pass	AA6-P1	612	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains: <ul style="list-style-type: none"> <input type="checkbox"/> Documentation of meeting either the 2002 VSS or the 2005 VVSG. 	OTHER	Pass	
04 - Fail	AA6-P1	613	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains DRE Technical Documentation in accordance with section 45.5.2.3.13 <ul style="list-style-type: none"> <input type="checkbox"/> Nature and Sensitivity of Tactile devices for touch screens <input type="checkbox"/> Nature and sensitivity of devices to display and select offices, candidates or issues. <input type="checkbox"/> Mean time between failure data collected on devices. <input type="checkbox"/> Problems caused for persons who experience seizures due to screen refresh rates 	OTHER	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	AA6-P1	614	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains security documentation in accordance with section 45.5.2.6.2 to prevent, detect and log: <ul style="list-style-type: none"> <input type="checkbox"/> Changes to ballot formats <input type="checkbox"/> Changes to casting and recording votes <input type="checkbox"/> Changes to calculating vote totals <input type="checkbox"/> Changes to reporting vote totals <input type="checkbox"/> Alteration to audit records <input type="checkbox"/> Preventing the recording of a vote <input type="checkbox"/> Introducing vote data without casting a vote <input type="checkbox"/> Changing calculated vote totals <input type="checkbox"/> Preventing access to vote data <input type="checkbox"/> Allowing access to determine content of specific votes by a specific voter. 	OTHER	Fail	
04 - Fail	AA6-P1	615	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains documentation of procedures to respond to the following known threats and vulnerabilities: <ul style="list-style-type: none"> <input type="checkbox"/> Procedures to monitor threats <input type="checkbox"/> Procedures to evaluate and respond to threats <input type="checkbox"/> Procedures to update and/or correct system based on review <input type="checkbox"/> Procedures to assist customers to update and/or implement corrective procedures. 	OTHER	Fail	
04 - Fail	AA6-P1	616	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains all of the following documentation: <ul style="list-style-type: none"> <input type="checkbox"/> Process for Battery Charging <input type="checkbox"/> Basis for useful life estimate <input type="checkbox"/> Trusted Build Instructions <input type="checkbox"/> Project Plan for 2005 VVSG Compliance <input type="checkbox"/> Minimum services and executables list. 	OTHER	Fail	
04 - Fail	AA6-P1	617	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains all of the following documentation: <ul style="list-style-type: none"> <input type="checkbox"/> Test Procedures & Specifications <input type="checkbox"/> Operations Procedures <input type="checkbox"/> Maintenance Procedures <input type="checkbox"/> Personnel Deployment and Training. 	OTHER	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	AA6-P1	618	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains all of the following documentation: <ul style="list-style-type: none"> <input type="checkbox"/> Configuration Management Plan <input type="checkbox"/> Quality Assurance Program <input type="checkbox"/> Processing Standards <input type="checkbox"/> Estimated time of Battery Operation. 	OTHER	Fail	
04 - Fail	AA6-P1	619	TRUE	TRUE	TRUE	A voting system provider that submits a voting system for certification shall complete the Secretary of State's "Application for Certification of Voting System". Which contains all of the following documentation: <ul style="list-style-type: none"> <input type="checkbox"/> Level, location and programming of audit trail information <input type="checkbox"/> Cryptography module to FIPS 140-2 standards <input type="checkbox"/> COTS Hardware, Software and services used for Telecommunications <input type="checkbox"/> Accessibility documentation. 	OTHER	Fail	
04 - Fail	AA6-P1	620	TRUE	TRUE	TRUE	Secretary of State's "Application for Certification of Voting System". Which contains all of the following documentation: <ul style="list-style-type: none"> <input type="checkbox"/> Procedures for V-VPAT use <input type="checkbox"/> V-VPAT Barcode Information <input type="checkbox"/> Security Procedures & Measures <input type="checkbox"/> Security Measures recommended to users. 	OTHER	Fail	
01 - Pass	AA6-P1	621	TRUE	TRUE	TRUE	Secretary of State's "Application for Certification of Voting System". Which contains all of the following documentation: <ul style="list-style-type: none"> <input type="checkbox"/> Any financial relationship between applicant and manufacturer, distributor, or retailer of the various components of voting system. 	OTHER	Pass	
01 - Pass	AA6-P1	622	TRUE	TRUE	TRUE	Secretary of State's "Application for Certification of Voting System". Which contains all of the following documentation: <ul style="list-style-type: none"> <input type="checkbox"/> Any additional information provided. 	OTHER	Pass	
02 - Pass Conditional	AC1-P3	101	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (g) Sealing and securing system devices; 	DRE	Indeterminable	Category 5 - Observations do not support the Status - Requirement is to Demonstrate Seals - Observations do not provide a basis for conditional pass or describe the condition that would be imposed..

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
02 - Pass Conditional	AC1-P3	102	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (b) Verification of complete system matching EAC certification; 	DRE	Indeterminable	Category 5 - Observations do not support the Status - Requirement is to Demonstrate verification - Observations do not provide a basis for conditional pass or describe the condition that would be imposed..
01 - Pass	AC1-P3	103	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (a) System overview; 	DRE	Pass	
01 - Pass	AC1-P3	104	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (e) Hardware diagnostics testing; 	DRE	Pass	
01 - Pass	AC1-P3	105	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (p) Troubleshooting.; 	DRE	Pass	
01 - Pass	AC1-P3	106	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (o) Certification of results; 	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC1-P3	107	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (f) Programming election media devices for various count methods; □ (i) Absentee; □ (ii) Early Voting; □ (iii) Precinct/Poll Place; □ (iv) Provisional; and □ (v) Vote Center. 	DRE	Pass	
01 - Pass	AC1-P3	108	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (h) Logic and accuracy testing; 	DRE	Pass	
01 - Pass	AC1-P3	109	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (i) Processing ballots; 	DRE	Pass	
01 - Pass	AC1-P3	110	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (j) Accessible use; 	DRE	Pass	
04 - Fail	AC1-P3	111	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (k) Accumulating results; 	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - Does the rule require accumulation of results between devices within the precinct?

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC1-P3	112	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (l) Post-election audit; 	DRE	Pass	
01 - Pass	AC1-P3	113	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (m) Canvass process handling; 	DRE	Pass	
01 - Pass	AC1-P3	114	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (n) Audit steps and procedures throughout all processes; 	DRE	Pass	
01 - Pass	AC2-P3	201	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (l) Post-election audit; 	PCOS	Pass	
01 - Pass	AC2-P3	202	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (e) Hardware diagnostics testing; 	PCOS	Pass	
02 - Pass Conditional	AC2-P3	203	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (g) Sealing and securing system devices; 	PCOS	Indeterminable	Category 5 - Observations do not support the Status - Requirement is to Demonstrate Seals - Observations do not provide a basis for conditional pass or describe the condition that would be imposed..

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC2-P3	204	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (i) Processing ballots; 	PCOS	Pass	
02 - Pass Conditional	AC2-P3	205	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (b) Verification of complete system matching EAC certification; 	PCOS	Indeterminable	Category 5 - Observations do not support the Status - Requirement is to Demonstrate verification - Observations do not provide a basis for conditional pass or describe the condition that would be imposed..
01 - Pass	AC2-P3	206	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (m) Canvass process handling; 	PCOS	Pass	
01 - Pass	AC2-P3	207	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (p) Troubleshooting.; 	PCOS	Pass	
01 - Pass	AC2-P3	208	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (a) System overview; 	PCOS	Pass	
04 - Fail	AC2-P3	209	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (k) Accumulating results; 	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - In the normal use of one device per polling place the system would produce accumulated results. Does the rule require accumulation of results between devices within the precinct?

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC2-P3	210	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (h) Logic and accuracy testing; 	PCOS	Pass	
01 - Pass	AC2-P3	211	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (n) Audit steps and procedures throughout all processes; 	PCOS	Pass	
01 - Pass	AC2-P3	212	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (o) Certification of results; 	PCOS	Pass	
01 - Pass	AC2-P3	213	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (l) Programming election media devices for various count methods; □ (i) Absentee; □ (ii) Early Voting; □ (iii) Precinct/Poll Place; □ (iv) Provisional; and □ (v) Vote Center. 	PCOS	Pass	
04 - Fail	AC3-P3	301	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (k) Accumulating results; 	CCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - This is a central count Optical Scan unit. Accumulation of its results would be achieved through WinEDS.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
02 - Pass Conditional	AC3-P3	302	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (g) Sealing and securing system devices; 	CCOS	Indeterminable	Category 5 - Observations do not support the Status - Requirement is to Demonstrate Seals - Observations do not provide a basis for conditional pass or describe the condition that would be imposed..
01 - Pass	AC3-P3	303	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (e) Hardware diagnostics testing; 	CCOS	Pass	
01 - Pass	AC3-P3	304	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (l) Post-election audit; 	CCOS	Pass	
01 - Pass	AC3-P3	305	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (p) Troubleshooting.; 	CCOS	Pass	
01 - Pass	AC3-P3	306	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (o) Certification of results; 	CCOS	Pass	
01 - Pass	AC3-P3	307	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (n) Audit steps and procedures throughout all processes; 	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC3-P3	308	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (m) Canvass process handling; 	CCOS	Pass	
01 - Pass	AC3-P3	309	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (i) Processing ballots; 	CCOS	Pass	
02 - Pass Conditional	AC3-P3	310	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (b) Verification of complete system matching EAC certification; 	CCOS	Indeterminable	Category 5 - Observations do not support the Status - Requirement is to Demonstrate verification - Observations do not provide a basis for conditional pass or describe the condition that would be imposed..
01 - Pass	AC3-P3	311	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (a) System overview; 	CCOS	Pass	
01 - Pass	AC3-P3	312	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (h) Logic and accuracy testing; 	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC3-P3	313	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (f) Programming election media devices for various count methods: <ul style="list-style-type: none"> □ (i) Absentee; □ (ii) Early Voting; □ (iii) Precinct/Poll Place; □ (iv) Provisional; and □ (v) Vote Center. 	CCOS	Pass	
01 - Pass	AC4-P3	401	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (a) System overview; 	Software	Pass	
01 - Pass	AC4-P3	402	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (c) Ballot definition creation; 	Software	Pass	
01 - Pass	AC4-P3	403	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (l) Post-election audit; 	Software	Pass	
01 - Pass	AC4-P3	404	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> □ (i) Processing ballots; 	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC4-P3	405	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (d) Printing ballots on demand; 	Software	Indeterminable	Categories 2 and 6 - Questionable interpretation of the requirement. Does the rule require the system to print ballots on demand or only that the process be demonstrated if part of the system. The Test Status of "Pass" shown in this worksheet conflicts with that "Fail" on the test work papers.
02 - Pass Conditional	AC4-P3	406	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (b) Verification of complete system matching EAC certification; 	Software	Indeterminable	Category 5 - Observations do not support the Status - Requirement is to Demonstrate verification - Observations do not provide a basis for conditional pass or describe the condition that would be imposed.
01 - Pass	AC4-P3	407	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (k) Accumulating results; 	Software	Pass	
01 - Pass	AC4-P3	408	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (h) Logic and accuracy testing; 	Software	Pass	
01 - Pass	AC4-P3	409	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (m) Canvass process handling; 	Software	Pass	
01 - Pass	AC4-P3	410	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (n) Audit steps and procedures throughout all processes; 	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AC4-P3	411	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (p) Troubleshooting; 	Software	Pass	
01 - Pass	AC4-P3	412	TRUE	TRUE	TRUE	The voting system provider is not required to be present for the functional testing, but shall provide a point of contact for support.	Software	Pass	
01 - Pass	AC4-P3	413	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (f) Programming election media devices for various count methods: <ul style="list-style-type: none"> (i) Absentee; (ii) Early Voting; (iii) Precinct/Poll Place; (iv) Provisional; and (v) Vote Center. 	Software	Pass	
01 - Pass	AC4-P3	414	TRUE	TRUE	TRUE	The demonstration period does not have a pre-determined agenda for the voting system provider to follow; however, presentations should be prepared to address and demonstrate with the specific system the following items as they pertain to each area and use within the voting system: <ul style="list-style-type: none"> (o) Certification of results; 	Software	Pass	
01 - Pass	AD1-P3	101	TRUE	TRUE	TRUE	If the EAC does not have a trusted build for the voting system submitted for certification, the voting system provider shall coordinate with the Secretary of State for the establishment of the trusted build. At a minimum this shall include a compilation of files placed on write-once media for which the Secretary of State has observed the chain of custody from time of source code compilation through delivery, and an established hash file distributed from a VSTL or the National Software Reference Library to compare federally certified versions against. All or any part of the Trusted Build disks may be encrypted. They should all be labeled as Proprietary Information if applicable and with identification of the vendor and release version based on the vendor's release instructions.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AD1-P3	102	TRUE	TRUE	TRUE	The trusted build of the voting system software, installation programs, and third party software (such as operating systems, drivers, etc.) used to install or to be installed on voting system devices shall be distributed on a write-once media.	DRE	Pass	
04 - Fail	AD1-P3	103	TRUE	TRUE	TRUE	The voting system shall allow the system administrative account to verify that the software installed is the certified software by comparing it to the trusted build or other reference information.	DRE	Fail	
04 - Fail	AD1-P3	104	TRUE	TRUE	TRUE	The proprietary software shall be installed on the workstation/server and all applicable voting system components by the testing board following the verification of the trusted build, and using the procedures provided by the voting system provider. After installation, the software and firmware shall be verified to the trusted build hash values.	DRE	Fail	
zz - Not Applicable	AD1-P3	105	TRUE	TRUE	TRUE	If the EAC has established a trusted build for the system submitted for certification, the trusted build shall be provided by the EAC. The voting system provider shall execute and submit to the EAC any necessary releases for the EAC to provide the same, and shall provide the Secretary of State's Office with a copy of such executed releases. In addition, the voting system provider shall submit all documentation and instructions necessary for the creation of and guided installation of files contained in the "trusted build" which will be created at the start of functional testing and will be the model tested against. The Secretary of State reserves the right to add additional instructions or guidance for the use of the trusted build when initiating the chain of custody process for a jurisdiction using the specified equipment.	DRE	Not Applicable	
01 - Pass	AD2-P3	201	TRUE	TRUE	TRUE	The voting system shall allow the system administrative account to verify that the software installed is the certified software by comparing it to the trusted build or other reference information.	PCOS	Pass	
01 - Pass	AD2-P3	202	TRUE	TRUE	TRUE	The trusted build of the voting system software, installation programs, and third party software (such as operating systems, drivers, etc.) used to install or to be installed on voting system devices shall be distributed on a write-once media.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	AD2-P3	203	TRUE	TRUE	TRUE	If the EAC does not have a trusted build for the voting system submitted for certification, the voting system provider shall coordinate with the Secretary of State for the establishment of the trusted build. At a minimum this shall include a compilation of files placed on write-once media for which the Secretary of State has observed the chain of custody from time of source code compilation through delivery, and an established hash file distributed from a VSTL or the National Software Reference Library to compare federally certified versions against. All or any part of the Trusted Build disks may be encrypted. They should all be labeled as Proprietary Information if applicable and with identification of the vendor and release version based on the vendor's release instructions.	PCOS	Pass	
01 - Pass	AD2-P3	204	TRUE	TRUE	TRUE	The proprietary software shall be installed on the workstation/server and all applicable voting system components by the testing board following the verification of the trusted build, and using the procedures provided by the voting system provider. After installation, the software and firmware shall be verified to the trusted build hash values.	PCOS	Pass	
zz - Not Applicable	AD2-P3	205	TRUE	TRUE	TRUE	If the EAC has established a trusted build for the system submitted for certification, the trusted build shall be provided by the EAC. The voting system provider shall execute and submit to the EAC any necessary releases for the EAC to provide the same, and shall provide the Secretary of State's Office with a copy of such executed releases. In addition, the voting system provider shall submit all documentation and instructions necessary for the creation of and guided installation of files contained in the "trusted build" which will be created at the start of functional testing and will be the model tested against. The Secretary of State reserves the right to add additional instructions or guidance for the use of the trusted build when initiating the chain of custody process for a jurisdiction using the specified equipment.	PCOS	Not Applicable	
04 - Fail	AD3-P3	301	TRUE	TRUE	TRUE	The voting system shall allow the system administrative account to verify that the software installed is the certified software by comparing it to the trusted build or other reference information.	CCOS	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	AD3-P3	302	TRUE	TRUE	TRUE	The proprietary software shall be installed on the workstation/server and all applicable voting system components by the testing board following the verification of the trusted build, and using the procedures provided by the voting system provider. After installation, the software and firmware shall be verified to the trusted build hash values.	CCOS	Fail	
zz - Not Applicable	AD3-P3	303	TRUE	TRUE	TRUE	If the EAC has established a trusted build for the system submitted for certification, the trusted build shall be provided by the EAC. The voting system provider shall execute and submit to the EAC any necessary releases for the EAC to provide the same, and shall provide the Secretary of State's Office with a copy of such executed releases. In addition, the voting system provider shall submit all documentation and instructions necessary for the creation of and guided installation of files contained in the "trusted build" which will be created at the start of functional testing and will be the model tested against. The Secretary of State reserves the right to add additional instructions or guidance for the use of the trusted build when initiating the chain of custody process for a jurisdiction using the specified equipment.	CCOS	Not Applicable	
01 - Pass	AD3-P3	304	TRUE	TRUE	TRUE	If the EAC does not have a trusted build for the voting system submitted for certification, the voting system provider shall coordinate with the Secretary of State for the establishment of the trusted build. At a minimum this shall include a compilation of files placed on write-once media for which the Secretary of State has observed the chain of custody from time of source code compilation through delivery, and an established hash file distributed from a VSTL or the National Software Reference Library to compare federally certified versions against. All or any part of the Trusted Build disks may be encrypted. They should all be labeled as Proprietary Information if applicable and with identification of the vendor and release version based on the vendor's release instructions.	CCOS	Pass	
01 - Pass	AD3-P3	305	TRUE	TRUE	TRUE	The trusted build of the voting system software, installation programs, and third party software (such as operating systems, drivers, etc.) used to install or to be installed on voting system devices shall be distributed on a write-once media.	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	AD4-P3	401	TRUE	TRUE	TRUE	The proprietary software shall be installed on the workstation/server and all applicable voting system components by the testing board following the verification of the trusted build, and using the procedures provided by the voting system provider. After installation, the software and firmware shall be verified to the trusted build hash values.	Software	Fail	
04 - Fail	AD4-P3	402	TRUE	TRUE	TRUE	The voting system shall allow the system administrative account to verify that the software installed is the certified software by comparing it to the trusted build or other reference information.	Software	Fail	
01 - Pass	AD4-P3	403	TRUE	TRUE	TRUE	The trusted build of the voting system software, installation programs, and third party software (such as operating systems, drivers, etc.) used to install or to be installed on voting system devices shall be distributed on a write-once media.	Software	Pass	
01 - Pass	AD4-P3	404	TRUE	TRUE	TRUE	If the EAC does not have a trusted build for the voting system submitted for certification, the voting system provider shall coordinate with the Secretary of State for the establishment of the trusted build. At a minimum this shall include a compilation of files placed on write-once media for which the Secretary of State has observed the chain of custody from time of source code compilation through delivery, and an established hash file distributed from a VSTL or the National Software Reference Library to compare federally certified versions against. All or any part of the Trusted Build disks may be encrypted. They should all be labeled as Proprietary Information if applicable and with identification of the vendor and release version based on the vendor's release instructions.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AD4-P3	405	TRUE	TRUE	TRUE	If the EAC has established a trusted build for the system submitted for certification, the trusted build shall be provided by the EAC. The voting system provider shall execute and submit to the EAC any necessary releases for the EAC to provide the same, and shall provide the Secretary of State's Office with a copy of such executed releases. In addition, the voting system provider shall submit all documentation and instructions necessary for the creation of and guided installation of files contained in the "trusted build" which will be created at the start of functional testing and will be the model tested against. The Secretary of State reserves the right to add additional instructions or guidance for the use of the trusted build when initiating the chain of custody process for a jurisdiction using the specified equipment.	Software	Not Applicable	
zz - Not Applicable	AE1-P3	101	TRUE	TRUE	TRUE	The voting system software shall have functions with fewer than six levels of indented scope, counted as follows: <pre> int function() { 1 { if (b = true) { 2 { if (c = true) { 3 { if (d = true) { 4 { while(e > 0) { 5 { code } } } } } } } } </pre>	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	102	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Leftover Debug Code.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	103	TRUE	TRUE	TRUE	Excluding code generated by commercial code generators, the voting system software code is written in small and easily identifiable modules, with no more than 50% of all modules exceeding 80 lines in length, no more than 5% of all modules exceeding 120 lines in length, and no modules exceeding 240 lines in length. "Lines" in this context, are defined as executable statements or flow control statements with suitable formatting and comments. The reviewer should consider the use of formatting, such as blocking into readable units, which supports the intent of this requirement where the module itself exceeds the limits.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	104	TRUE	TRUE	TRUE	Where code generators are used, the voting system software source file segments provided by the code generators shall be marked as such with comments defining the logic invoked and, a copy of the source code provided to the accredited test lab with the generated source code replaced with an unexpanded macro call or its equivalent.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	105	TRUE	TRUE	TRUE	Upon exit() at any point, the voting system software shall present a message to the operator indicating the reason for the exit().	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	106	TRUE	TRUE	TRUE	The voting system software shall have no line of code exceeding 80 columns in width (including comments and tab expansions) without justification.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	107	TRUE	TRUE	TRUE	The voting system software shall contain no more than one executable statement and no more than one flow control statement for each line of source code.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	108	TRUE	TRUE	TRUE	In languages where embedded executable statements are permitted in conditional expressions, the single embedded statement may be considered a part of the conditional expression. Any additional executable statements should be split out to other lines.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	109	TRUE	TRUE	TRUE	The voting system software shall avoid mixed-mode operations. If mixed mode usage is necessary, then all uses shall be identified and clearly explained by comments.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	110	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names used in code and in documentation shall be consistent.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	111	TRUE	TRUE	TRUE	The voting system software shall reference variables by fewer than five levels of indirection.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	112	TRUE	TRUE	TRUE	The voting system software shall initialize every variable upon declaration where permitted.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	113	TRUE	TRUE	TRUE	The voting system software shall have all constants other than 0 and 1 defined or enumerated, or shall have a comment which clearly explains what each constant means in the context of its use. Where "0" and "1" have multiple meanings in the code unit, even they shall be identified.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	114	TRUE	TRUE	TRUE	The voting system software shall only contain the minimum implementation of the "a = b ? c : d" syntax. Expansions such as "a?(b?c:d);" are prohibited.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	115	TRUE	TRUE	TRUE	The voting system software shall have all assert() statements coded such that they are absent from a production compilation. Such coding may be implemented by #ifdefs that remove them from or include them in the compilation. If implemented, the initial program identification in setup should identify that assert() is enabled and active as a test version.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	116	TRUE	TRUE	TRUE	Control Constructs within the modules shall be limited to the acceptable constructs of Sequence, If-Then-Else, Do-While, Do-Until, Case, and the General Loop (including the special case for loop). If the programming language used does not provide these control constructs, the vendor shall provide comparable control structure logic. The constructs shall be used consistently throughout the code. No other constructs shall be used to control program logic and execution.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	117	TRUE	TRUE	TRUE	While some programming languages do not create programs as linear processes, stepping from an initial condition through changes to a conclusion, the program components nonetheless contain procedures (such as "methods" in object-oriented languages). In these programming languages, the procedures shall execute through these control constructs or their equivalents, as defined and provided by the vendor.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	118	TRUE	TRUE	TRUE	Operator intervention or logic that evaluates received or stored data shall not redirect program control within a program routine. Program control may be redirected within a routine by calling subroutines, procedures, and functions, and by interrupt service routines and exception handlers (due to abnormal error conditions). Do-While (False) constructs and intentional exceptions (used as GoTos) are prohibited.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	119	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Object, function, procedure, and variable names shall be chosen to enhance the readability and intelligibility of the program. Names shall be selected so that their parts of speech represent their use, such as nouns to represent objects and verbs to represent functions.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	120	TRUE	TRUE	TRUE	The voting system software shall use separate and consistent formats to distinguish between normal status and error or exception messages. All messages shall be self-explanatory and shall not require the operator to perform any look-up to interpret them, except for error messages that require resolution by a trained technician.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	121	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	122	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: Heap Inspection	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	123	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: String Management / Manipulation.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	124	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes the following features, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	125	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes UNBOUNDED ARRAYS OR STRINGS (INCLUDES BUFFERS USED TO MOVE DATA, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	126	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes POINTER VARIABLES, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	127	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes DYNAMIC MEMORY ALLOCATION AND MANAGEMENT, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	128	TRUE	TRUE	TRUE	By 3/31/08, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after 3/31/08: Each module shall have a specific function that can be tested and verified independently of the remainder of the code. In practice, some additional modules (such as library modules) may be needed to compile the module under test, but the modular construction allows the supporting modules to be	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	129	TRUE	TRUE	TRUE	Each module shall be uniquely and mnemonically named, using names that differ by more than a single character. In addition to the unique name, the modules shall include a set of header comments identifying the module's purpose, design, conditions, and version history, followed by the operational code. Headers are optional for modules of fewer than ten executable lines where the subject module is embedded in a larger module that has a header containing the header information. Library modules shall also have a header comment describing the purpose of the library and version information.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	130	TRUE	TRUE	TRUE	The voting system software shall provide controls to prevent any vote counter from overflowing. Assuming the counter size is large enough such that the value will never be reached does not meet this requirement.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	131	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Each module shall have a single entry point, and a single exit point, for normal process flow. For library modules or languages such as the object-oriented languages, the entry point is to the individual contained module or method invoked. The single exit point is the point where control is re	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	132	TRUE	TRUE	TRUE	For those languages with unbound arrays, the voting system software shall provide controls to prevent writing beyond the array, string, or buffer boundaries.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	133	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	134	TRUE	TRUE	TRUE	Using the replacement rule to replace one or both of the processes in the Sequence construct with other Sequence constructs, a large block of sequential code may be formed. The entire chain is recognized as a Sequence construct and is sometimes called a BLOCK construct. Sequences shall be marked with special symbols or punctuation to delimit where it starts and where it ends.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	135	TRUE	TRUE	TRUE	A special case of the GENERAL LOOP is the FOR loop. The FOR loop may be programmed as a DO-WHILE loop. The FOR loop shall execute on a counter. The control FOR statement shall define a counter variable or variables, a test for ending the loop, and a standard method of changing the variable(s) on each pass such as incrementing or decrementing.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	136	TRUE	TRUE	TRUE	The use of the FOR loop shall avoid common errors such as loop that never ends. The GENERAL LOOP shall not be used where one of the other loop structures will serve. However, if defined in the language, it may be useful in defining some loops where the exit needs to occur in the middle. Also, in other languages the GENERAL LOOP logic may be used to simulate the other control constructs. The use of the GENERAL LOOP shall require the strict enforcement of coding conventions to avoid problems.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	137	TRUE	TRUE	TRUE	For those languages with pointers or which provide for specifying absolute memory locations, the voting system software shall provide controls that prevent the pointer or address from being used to overwrite executable instructions or to access inappropriate areas where vote counts or audit records are stored.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	138	TRUE	TRUE	TRUE	The voting system software code shall use uniform calling sequences. All parameters shall either be validated for type and range on entry into each unit or the unit comments shall explicitly identify the type and range for the reference of the programmer and tester. Validation may be performed implicitly by the compiler or explicitly by the programmer.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	139	TRUE	TRUE	TRUE	The voting system software code shall have the return explicitly defined for callable units such as functions or procedures (do not drop through by default) for C-based languages and others to which this applies, and in the case of functions, has the return value explicitly assigned. Where the return is only expected to return a successful value, the C convention of returning zero shall be used. If an uncorrected error occurs so the unit shall return without correctly completing its objective, a non-zero return value shall be given even if there is no expectation of testing the return. An exception may be made where the return value of the function has a data range including zero.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	140	TRUE	TRUE	TRUE	The voting system software code shall not use macros that contain returns or pass control beyond the next statement.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	141	TRUE	TRUE	TRUE	The voting system software code shall be indented consistently and clearly to indicate logical levels.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	142	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: All required resources, such as data accessed by the module, should either be contained within the module or explicitly identified as input or output to the module. Within the constraints of the programming language, such resources shall be placed at the lowest level where shared access is	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	143	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Use After Free;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	144	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: SQL Injection.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	145	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Stack Overflow;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	146	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Heap Overflow;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	147	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Format string vulnerability;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	148	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper Null Termination.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	149	TRUE	TRUE	TRUE	The Application shall not open database tables for direct editing.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	150	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Time-of-check/Time-of-use race condition;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	151	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Overflow of static internal buffer;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	152	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: OS Command Injection (also called "Shell Injection");	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	153	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Double Free;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	154	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unchecked Error Condition.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	155	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Uninitialized variable;	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	156	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unintentional pointer scaling;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	157	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper pointer subtraction;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	158	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Null Dereference.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	159	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Private Array-Typed Field Returned from a Public Method;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	160	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Public Data Assigned to Private Array-Typed Field;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	161	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names shall be unique within an application. Names shall differ by more than a single character. All single-character names are forbidden except those for variables used as loop indexes. In large systems where subsystems tend to be developed independently, duplicate names may be used where the scope of the name is unique within the application. Names shall always be unique where modules are shared.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	162	TRUE	TRUE	TRUE	For those languages supporting case statements, the voting system software shall have a default choice explicitly defined to catch values not included in the case list.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	163	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Memory Leaks;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	164	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: The purpose of the unit and how it works.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	165	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Language keywords shall not be used as names of objects, functions, procedures, variables or in any manner not consistent with the design of the language.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	166	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unrestricted Critical Resource Lock;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	167	TRUE	TRUE	TRUE	All modules of the voting system software shall adhere to basic coding conventions. The vendors shall identify the published, reviewed, and industry-accepted coding conventions used.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	168	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Resource Injection;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	169	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Other units called and the calling sequence.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	170	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: A description of input parameters and outputs.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	171	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: File references by name and method of access (i.e., read, write, modify or append).	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	172	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Global variables used.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	173	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Date of creation and a revision record.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	174	TRUE	TRUE	TRUE	Descriptive comments shall be provided to identify objects and data types. All variables shall have comments at the point of declaration clearly explaining their use. Where multiple variables that share the same meaning are required, the variables may share the same comment.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	175	TRUE	TRUE	TRUE	In-line comments shall be provided to facilitate interpretation of functional operations, tests, and branching.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	176	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Path manipulation;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	177	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Cross Site Scripting, Basic X;	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	178	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. After initiation of election day testing, no source code or compilers or assemblers shall be resident or accessible.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	179	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The election-specific programming may be installed and resident as firmware, provided that such firmware is installed on a component (such as a computer chip) other than the component on which the operating system resides.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	180	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The voting system bootstrap, monitor, and device-controller software may be resident permanently as firmware, provided that this firmware has been shown to be inaccessible to activation or control by any means other than by the authorized initiation and execution of the vote counting program, and its associated exception handlers.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE1-P3	181	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. To prevent alteration of executable code, no software shall be permanently installed or resident in the voting system unless the system documentation states that the jurisdiction shall provide a secure physical and procedural environment for the storage, handling, preparation, and transportation of the system hardware.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	182	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. If software is resident in the system as firmware, the vendor shall require and state in the system documentation that every device is to be retested to validate each ROM prior to the start of elections operations.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	183	TRUE	TRUE	TRUE	All comments shall be formatted in a uniform manner that makes it easy to distinguish them from executable code.	DRE	Not Applicable	
zz - Not Applicable	AE1-P3	184	TRUE	TRUE	TRUE	Assembly code shall contain descriptive and informative comments such that its executable lines can be clearly understood.	DRE	Not Applicable	
zz - Not Applicable	AE2-P3	201	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Cross Site Scripting, Basic X;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	202	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. If software is resident in the system as firmware, the vendor shall require and state in the system documentation that every device is to be retested to validate each ROM prior to the start of elections operations.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	203	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: File references by name and method of access (i.e., read, write, modify or append).	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	204	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Global variables used.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	205	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Date of creation and a revision record.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	206	TRUE	TRUE	TRUE	Descriptive comments shall be provided to identify objects and data types. All variables shall have comments at the point of declaration clearly explaining their use. Where multiple variables that share the same meaning are required, the variables may share the same comment.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	207	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: SQL Injection.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	208	TRUE	TRUE	TRUE	Assembly code shall contain descriptive and informative comments such that its executable lines can be clearly understood.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	209	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Leftover Debug Code.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	210	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: A description of input parameters and outputs.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	211	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. To prevent alteration of executable code, no software shall be permanently installed or resident in the voting system unless the system documentation states that the jurisdiction shall provide a secure physical and procedural environment for the storage, handling, preparation, and transportation of the system hardware.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	212	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The voting system bootstrap, monitor, and device-controller software may be resident permanently as firmware, provided that this firmware has been shown to be inaccessible to activation or control by any means other than by the authorized initiation and execution of the vote counting program, and its associated exception handlers.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	213	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The election-specific programming may be installed and resident as firmware, provided that such firmware is installed on a component (such as a computer chip) other than the component on which the operating system resides.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	214	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper pointer subtraction;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	215	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Path manipulation;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	216	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Other units called and the calling sequence.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	217	TRUE	TRUE	TRUE	In-line comments shall be provided to facilitate interpretation of functional operations, tests, and branching.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	218	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Public Data Assigned to Private Array-Typed Field;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	219	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Overflow of static internal buffer;	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	220	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. After initiation of election day testing, no source code or compilers or assemblers shall be resident or accessible.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	221	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: OS Command Injection (also called "Shell Injection");	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	222	TRUE	TRUE	TRUE	Using the replacement rule to replace one or both of the processes in the Sequence construct with other Sequence constructs, a large block of sequential code may be formed. The entire chain is recognized as a Sequence construct and is sometimes called a BLOCK construct. Sequences shall be marked with special symbols or punctuation to delimit where it starts and where it ends.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	223	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: Heap Inspection	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	224	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unrestricted Critical Resource Lock;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	225	TRUE	TRUE	TRUE	All modules of the voting system software shall adhere to basic coding conventions. The vendors shall identify the published, reviewed, and industry-accepted coding conventions used.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	226	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Stack Overflow;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	227	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Heap Overflow;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	228	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Format string vulnerability;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	229	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper Null Termination.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	230	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: String Management / Manipulation.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	231	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Time-of-check/Time-of-use race condition;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	232	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: The purpose of the unit and how it works.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	233	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Memory Leaks;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	234	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Resource Injection;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	235	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Double Free;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	236	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Use After Free;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	237	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Uninitialized variable;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	238	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unintentional pointer scaling;	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	239	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Null Dereference.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	240	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unchecked Error Condition.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	241	TRUE	TRUE	TRUE	All comments shall be formatted in a uniform manner that makes it easy to distinguish them from executable code.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	242	TRUE	TRUE	TRUE	The Application shall not open database tables for direct editing.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	243	TRUE	TRUE	TRUE	For those languages supporting case statements, the voting system software shall have a default choice explicitly defined to catch values not included in the case list.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	244	TRUE	TRUE	TRUE	The voting system software shall only contain the minimum implementation of the "a = b ? c : d" syntax. Expansions such as "a=b?b?c:d;" are prohibited.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	245	TRUE	TRUE	TRUE	The voting system software shall have all assert() statements coded such that they are absent from a production compilation. Such coding may be implemented by #ifdefs that remove them from or include them in the compilation. If implemented, the initial program identification in setup should identify that assert() is enabled and active as a test version.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	246	TRUE	TRUE	TRUE	Control Constructs within the modules shall be limited to the acceptable constructs of Sequence, If-Then-Else, Do-While, Do-Until, Case, and the General Loop (including the special case for loop). If the programming language uses does not provide these control constructs, the vendor shall provide comparable control structure logic. The constructs shall be used consistently throughout the code. No other constructs shall be used to control program logic and execution.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	247	TRUE	TRUE	TRUE	The voting system software shall have functions with fewer than six levels of indented scope, counted as follows: int function() { if (a = true) { 1 { if (b = true) { 2 { if (c = true) { 3 { if (d = true) { 4 { while(e > 0) { 5 { code } } } } } } } } } } } } } }	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	248	TRUE	TRUE	TRUE	The voting system software shall reference variables by fewer than five levels of indirection.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	249	TRUE	TRUE	TRUE	The voting system software shall use separate and consistent formats to distinguish between normal status and error or exception messages. All messages shall be self-explanatory and shall not require the operator to perform any look-up to interpret them, except for error messages that require resolution by a trained technician.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	250	TRUE	TRUE	TRUE	The voting system software shall avoid mixed-mode operations. If mixed mode usage is necessary, then all uses shall be identified and clearly explained by comments.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	251	TRUE	TRUE	TRUE	In languages where embedded executable statements are permitted in conditional expressions, the single embedded statement may be considered a part of the conditional expression. Any additional executable statements should be split out to other lines.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	252	TRUE	TRUE	TRUE	The voting system software shall have all constants other than 0 and 1 defined or enumerated, or shall have a comment which clearly explains what each constant means in the context of its use. Where "0" and "1" have multiple meanings in the code unit, even they shall be identified.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	253	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes DYNAMIC MEMORY ALLOCATION AND MANAGEMENT, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	254	TRUE	TRUE	TRUE	The voting system software shall contain no more than one executable statement and no more than one flow control statement for each line of source code.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	255	TRUE	TRUE	TRUE	The voting system software shall provide controls to prevent any vote counter from overflowing. Assuming the counter size is large enough such that the value will never be reached does not meet this requirement.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	256	TRUE	TRUE	TRUE	The voting system software code shall be indented consistently and clearly to indicate logical levels.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	257	TRUE	TRUE	TRUE	Excluding code generated by commercial code generators, the voting system software code is written in small and easily identifiable modules, with no more than 50% of all modules exceeding 60 lines in length, no more than 5% of all modules exceeding 120 lines in length, and no modules exceeding 240 lines in length. "Lines" in this context, are defined as executable statements or flow control statements with suitable formatting and comments. The reviewer should consider the use of formatting, such as blocking into readable units, which supports the intent of this requirement where the module itself exceeds the limits.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	258	TRUE	TRUE	TRUE	The voting system software shall have no line of code exceeding 80 columns in width (including comments and tab expansions) without justification.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	259	TRUE	TRUE	TRUE	Operator intervention or logic that evaluates received or stored data shall not redirect program control within a program routine. Program control may be redirected within a routine by calling subroutines, procedures, and functions, and by interrupt service routines and exception handlers (due to abnormal error conditions). Do-While (False) constructs and intentional exceptions (used as GoTos) are prohibited.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	260	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names shall be unique within an application. Names shall differ by more than a single character. All single-character names are forbidden except those for variables used as loop indexes. In large systems where subsystems tend to be developed independently, duplicate names may be used where the scope of the name is unique within the application. Names shall always be unique where modules are shared.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	261	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Object, function, procedure, and variable names shall be chosen to enhance the readability and intelligibility of the program. Names shall be selected so that their parts of speech represent their use, such as nouns to represent objects and verbs to represent functions.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	262	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names used in code and in documentation shall be consistent.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	263	TRUE	TRUE	TRUE	Upon exit() at any point, the voting system software shall present a message to the operator indicating the reason for the exit().	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	264	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes the following features, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	265	TRUE	TRUE	TRUE	While some programming languages do not create programs as linear processes, stepping from an initial condition through changes to a conclusion, the program components nonetheless contain procedures (such as "methods" in object-oriented languages). In these programming languages, the procedures shall execute through these control constructs or their equivalents, as defined and provided by the vendor.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	266	TRUE	TRUE	TRUE	By 3/31/08, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after 3/31/08: Each module shall have a specific function that can be tested and verified independently of the remainder of the code. In practice, some additional modules (such as library modules) may be needed to compile the module under test, but the modular construction allows the supporting modules to be	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	267	TRUE	TRUE	TRUE	The voting system software shall initialize every variable upon declaration where permitted.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	268	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: All required resources, such as data accessed by the module, should either be contained within the module or explicitly identified as input or output to the module. Within the constraints of the programming language, such resources shall be placed at the lowest level where shared access is	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	269	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Each module shall have a single entry point, and a single exit point, for normal process flow. For library modules or languages such as the object-oriented languages, the entry point is to the individual contained module or method invoked. The single exit point is the point where control is re	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	270	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	271	TRUE	TRUE	TRUE	Each module shall be uniquely and mnemonically named, using names that differ by more than a single character. In addition to the unique name, the modules shall include a set of header comments identifying the module's purpose, design, conditions, and version history, followed by the operational code. Headers are optional for modules of fewer than ten executable lines where the subject module is embedded in a larger module that has a header containing the header information. Library modules shall also have a header comment describing the purpose of the library and version information.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	272	TRUE	TRUE	TRUE	A special case of the GENERAL LOOP is the FOR loop. The FOR loop may be programmed as a DO-WHILE loop. The FOR loop shall execute on a counter. The control FOR statement shall define a counter variable or variables, a test for ending the loop, and a standard method of changing the variable(s) on each pass such as incrementing or decrementing.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	273	TRUE	TRUE	TRUE	The use of the FOR loop shall avoid common errors such as a loop that never ends. The GENERAL LOOP shall not be used where one of the other loop structures will serve. However, if defined in the language, it may be useful in defining some loops where the exit needs to occur in the middle. Also, in other languages the GENERAL LOOP logic may be used to simulate the other control constructs. The use of the GENERAL LOOP shall require the strict enforcement of coding conventions to avoid problems.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	274	TRUE	TRUE	TRUE	For those languages with pointers or which provide for specifying absolute memory locations, the voting system software shall provide controls that prevent the pointer or address from being used to overwrite executable instructions or to access inappropriate areas where vote counts or audit records are stored.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	275	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes UNBOUNDED ARRAYS OR STRINGS (INCLUDES BUFFERS USED TO MOVE DATA, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	276	TRUE	TRUE	TRUE	For those languages with unbound arrays, the voting system software shall provide controls to prevent writing beyond the array, string, or buffer boundaries.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	277	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Language keywords shall not be used as names of objects, functions, procedures, variables or in any manner not consistent with the design of the language.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	278	TRUE	TRUE	TRUE	The voting system software code shall use uniform calling sequences. All parameters shall either be validated for type and range on entry into each unit or the unit comments shall explicitly identify the type and range for the reference of the programmer and tester. Validation may be performed implicitly by the compiler or explicitly by the programmer.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	279	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes POINTER VARIABLES, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	280	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Private Array-Typed Field Returned from a Public Method:	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	281	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	282	TRUE	TRUE	TRUE	The voting system software code shall not use macros that contain returns or pass control beyond the next statement.	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE2-P3	283	TRUE	TRUE	TRUE	The voting system software code shall have the return explicitly defined for callable units such as functions or procedures (do not drop through by default) for C-based languages and others to which this applies, and in the case of functions, has the return value explicitly assigned. Where the return is only expected to return a successful value, the C convention of returning zero shall be used. If an uncorrected error occurs so the unit shall return without correctly completing its objective, a non-zero return value shall be given even if there is no expectation of testing the return. An exception may be made where the return value of the function has a data range including zero.	PCOS	Not Applicable	
zz - Not Applicable	AE2-P3	284	TRUE	TRUE	TRUE	Where code generators are used, the voting system software source file segments provided by the code generators shall be marked as such with comments defining the logic invoked and, a copy of the source code provided to the accredited test lab with the generated source code replaced with an unexpanded macro call or its equivalent.	PCOS	Not Applicable	
zz - Not Applicable	AE3-P3	301	TRUE	TRUE	TRUE	The use of the FOR loop shall avoid common errors such as a loop that never ends. The GENERAL LOOP shall not be used where one of the other loop structures will serve. However, if defined in the language, it may be useful in defining some loops where the exit needs to occur in the middle. Also, in other languages the GENERAL LOOP logic may be used to simulate the other control constructs. The use of the GENERAL LOOP shall require the strict enforcement of coding conventions to avoid problems.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	302	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Language keywords shall not be used as names of objects, functions, procedures, variables or in any manner not consistent with the design of the language.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	303	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes UNBOUNDED ARRAYS OR STRINGS (INCLUDES BUFFERS USED TO MOVE DATA, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	304	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes POINTER VARIABLES, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	305	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Private Array-Typed Field Returned from a Public Method;	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	306	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	307	TRUE	TRUE	TRUE	The voting system software code shall not use macros that contain returns or pass control beyond the next statement.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	308	TRUE	TRUE	TRUE	The voting system software code shall have the return explicitly defined for callable units such as functions or procedures (do not drop through by default) for C-based languages and others to which this applies, and in the case of functions, has the return value explicitly assigned. Where the return is only expected to return a successful value, the C convention of returning zero shall be used. If an uncorrected error occurs so the unit shall return without correctly completing its objective, a non-zero return value shall be given even if there is no expectation of testing the return. An exception may be made where the return value of the function has a data range including zero.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	309	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Object, function, procedure, and variable names shall be chosen to enhance the readability and intelligibility of the program. Names shall be selected so that their parts of speech represent their use, such as nouns to represent objects and verbs to represent functions.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	310	TRUE	TRUE	TRUE	For those languages with pointers or which provide for specifying absolute memory locations, the voting system software shall provide controls that prevent the pointer or address from being used to overwrite executable instructions or to access inappropriate areas where vote counts or audit records are stored.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	311	TRUE	TRUE	TRUE	The voting system software shall only contain the minimum implementation of the "a = b ? c : d" syntax. Expansions such as "a?(b?c:d);e;" are prohibited.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	312	TRUE	TRUE	TRUE	A special case of the GENERAL LOOP is the FOR loop. The FOR loop may be programmed as a DO-WHILE loop. The FOR loop shall execute on a counter. The control FOR statement shall define a counter variable or variables, a test for ending the loop, and a standard method of changing the variable(s) on each pass such as incrementing or decrementing.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	313	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security.: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes the following features, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	314	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	315	TRUE	TRUE	TRUE	For those languages with unbound arrays, the voting system software shall provide controls to prevent writing beyond the array, string, or buffer boundaries.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	316	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Each module shall have a single entry point, and a single exit point, for normal process flow. For library modules or languages such as the object-oriented languages, the entry point is to the individual contained module or method invoked. The single exit point is the point where control is re	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	317	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: All required resources, such as data accessed by the module, should either be contained within the module or explicitly identified as input or output to the module. Within the constraints of the programming language, such resources shall be placed at the lowest level where shared access is	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	318	TRUE	TRUE	TRUE	Each module shall be uniquely and mnemonically named, using names that differ by more than a single character. In addition to the unique name, the modules shall include a set of header comments identifying the module's purpose, design, conditions, and version history, followed by the operational code. Headers are optional for modules of fewer than ten executable lines where the subject module is embedded in a larger module that has a header containing the header information. Library modules shall also have a header comment describing the purpose of the library and version information.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	319	TRUE	TRUE	TRUE	By 3/31/08, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after 3/31/08: Each module shall have a specific function that can be tested and verified independently of the remainder of the code. In practice, some additional modules (such as library modules) may be needed to compile the module under test, but the modular construction allows the supporting modules to be	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	320	TRUE	TRUE	TRUE	The voting system software code shall use uniform calling sequences. All parameters shall either be validated for type and range on entry into each unit or the unit comments shall explicitly identify the type and range for the reference of the programmer and tester. Validation may be performed implicitly by the compiler or explicitly by the programmer.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	321	TRUE	TRUE	TRUE	The voting system software shall contain no more than one executable statement and no more than one flow control statement for each line of source code.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	322	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names used in code and in documentation shall be consistent.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	323	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names shall be unique within an application. Names shall differ by more than a single character. All single-character names are forbidden except those for variables used as loop indexes. In large systems where subsystems tend to be developed independently, duplicate names may be used where the scope of the name is unique within the application. Names shall always be unique where modules are shared.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	324	TRUE	TRUE	TRUE	Operator intervention or logic that evaluates received or stored data shall not redirect program control within a program routine. Program control may be redirected within a routine by calling subroutines, procedures, and functions, and by interrupt service routines and exception handlers (due to abnormal error conditions). Do-While (False) constructs and intentional exceptions (used as GoTos) are prohibited.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	325	TRUE	TRUE	TRUE	The voting system software shall have no line of code exceeding 80 columns in width (including comments and tab expansions) without justification.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	326	TRUE	TRUE	TRUE	Excluding code generated by commercial code generators, the voting system software code is written in small and easily identifiable modules, with no more than 50% of all modules exceeding 60 lines in length, no more than 5% of all modules exceeding 120 lines in length, and no modules exceeding 240 lines in length. "Lines" in this context, are defined as executable statements or flow control statements with suitable formatting and comments. The reviewer should consider the use of formatting, such as blocking into readable units, which supports the intent of this requirement where the module itself exceeds the limits.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	327	TRUE	TRUE	TRUE	The voting system software code shall be indented consistently and clearly to indicate logical levels.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	328	TRUE	TRUE	TRUE	The voting system software shall provide controls to prevent any vote counter from overflowing. Assuming the counter size is large enough such that the value will never be reached does not meet this requirement.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	329	TRUE	TRUE	TRUE	For those languages supporting case statements, the voting system software shall have a default choice explicitly defined to catch values not included in the case list.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	330	TRUE	TRUE	TRUE	The voting system software shall initialize every variable upon declaration where permitted.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	331	TRUE	TRUE	TRUE	Upon exit() at any point, the voting system software shall present a message to the operator indicating the reason for the exit().	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	332	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: Heap Inspection	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	333	TRUE	TRUE	TRUE	In languages where embedded executable statements are permitted in conditional expressions, the single embedded statement may be considered a part of the conditional expression. Any additional executable statements should be split out to other lines.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	334	TRUE	TRUE	TRUE	The voting system software shall avoid mixed-mode operations. If mixed mode usage is necessary, then all uses shall be identified and clearly explained by comments.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	335	TRUE	TRUE	TRUE	The voting system software shall use separate and consistent formats to distinguish between normal status and error or exception messages. All messages shall be self-explanatory and shall not require the operator to perform any look-up to interpret them, except for error messages that require resolution by a trained technician.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	336	TRUE	TRUE	TRUE	The voting system software shall reference variables by fewer than five levels of indirection.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	337	TRUE	TRUE	TRUE	The voting system software shall have functions with fewer than six levels of indented scope, counted as follows: <pre> int function() { 1 if (a = true) { 2 { 3 if (c = true) { 4 while (e > 0) { 5 { code } } } } } </pre>	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	338	TRUE	TRUE	TRUE	Control Constructs within the modules shall be limited to the acceptable constructs of Sequence, If-Then-Else, Do-While, Do-Until, Case, and the General Loop (including the special case for loop). If the programming language used does not provide these control constructs, the vendor shall provide comparable control structure logic. The constructs shall be used consistently throughout the code. No other constructs shall be used to control program logic and execution.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	339	TRUE	TRUE	TRUE	The voting system software shall have all assert() statements coded such that they are absent from a production compilation. Such coding may be implemented by #ifdef()s that remove them from or include them in the compilation. If implemented, the initial program identification in setup should identify that assert() is enabled and active as a test version.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	340	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Overflow of static internal buffer;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	341	TRUE	TRUE	TRUE	While some programming languages do not create programs as linear processes, stepping from an initial condition through changes to a conclusion, the program components nonetheless contain procedures (such as "methods" in object-oriented languages). In these programming languages, the procedures shall execute through these control constructs or their equivalents, as defined and provided by the vendor.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	342	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Time-of-check/Time-of-use race condition;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	343	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VWSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes DYNAMIC MEMORY ALLOCATION AND MANAGEMENT, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	344	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unchecked Error Condition.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	345	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Null Dereference.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	346	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unintentional pointer scaling;	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	347	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Uninitialized variable;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	348	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Use After Free;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	349	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Double Free;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	350	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Resource Injection;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	351	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: The purpose of the unit and how it works.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	352	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: OS Command Injection (also called "Shell Injection");	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	353	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Other units called and the calling sequence.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	354	TRUE	TRUE	TRUE	The Application shall not open database tables for direct editing.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	355	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper Null Termination.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	356	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Format string vulnerability;	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	357	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Heap Overflow;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	358	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Stack Overflow;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	359	TRUE	TRUE	TRUE	All modules of the voting system software shall adhere to basic coding conventions. The vendors shall identify the published, reviewed, and industry-accepted coding conventions used.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	360	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unrestricted Critical Resource Lock;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	361	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: String Management / Manipulation.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	362	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Memory Leaks;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	363	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. If software is resident in the system as firmware, the vendor shall require and state in the system documentation that every device is to be retested to validate each ROM prior to the start of elections operations.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	364	TRUE	TRUE	TRUE	The voting system software shall have all constants other than 0 and 1 defined or enumerated, or shall have a comment which clearly explains what each constant means in the context of its use. Where "0" and "1" have multiple meanings in the code unit, even they shall be identified.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	365	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper pointer subtraction;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	366	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Public Data Assigned to Private Array-Typed Field;	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	367	TRUE	TRUE	TRUE	In-line comments shall be provided to facilitate interpretation of functional operations, tests, and branching.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	368	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Cross Site Scripting, Basic X;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	369	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Path manipulation;	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	370	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. After initiation of election day testing, no source code or compilers or assemblers shall be resident or accessible.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	371	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The election-specific programming may be installed and resident as firmware, provided that such firmware is installed on a component (such as a computer chip) other than the component on which the operating system resides.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	372	TRUE	TRUE	TRUE	All comments shall be formatted in a uniform manner that makes it easy to distinguish them from executable code.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	373	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. To prevent alteration of executable code, no software shall be permanently installed or resident in the voting system unless the system documentation states that the jurisdiction shall provide a secure physical and procedural environment for the storage, handling, preparation, and transportation of the system hardware.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	374	TRUE	TRUE	TRUE	Using the replacement rule to replace one or both of the processes in the Sequence construct with other Sequence constructs, a large block of sequential code may be formed. The entire chain is recognized as a Sequence construct and is sometimes called a BLOCK construct. Sequences shall be marked with special symbols or punctuation to delimit where it starts and where it ends.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	375	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Leftover Debug Code.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	376	TRUE	TRUE	TRUE	Assembly code shall contain descriptive and informative comments such that its executable lines can be clearly understood.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	377	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: SQL Injection.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	378	TRUE	TRUE	TRUE	Descriptive comments shall be provided to identify objects and data types. All variables shall have comments at the point of declaration clearly explaining their use. Where multiple variables that share the same meaning are required, the variables may share the same comment.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	379	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Date of creation and a revision record.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	380	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Global variables used.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	381	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: File references by name and method of access (i.e., read, write, modify or append).	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	382	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: A description of input parameters and outputs.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE3-P3	383	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The voting system bootstrap, monitor, and device-controller software may be resident permanently as firmware, provided that this firmware has been shown to be inaccessible to activation or control by any means other than by the authorized initiation and execution of the vote counting program, and its associated exception handlers.	CCOS	Not Applicable	
zz - Not Applicable	AE3-P3	384	TRUE	TRUE	TRUE	Where code generators are used, the voting system software source file segments provided by the code generators shall be marked as such with comments defining the logic invoked and, a copy of the source code provided to the accredited test lab with the generated source code replaced with an unexpanded macro call or its equivalent.	CCOS	Not Applicable	
zz - Not Applicable	AE4-P3	401	TRUE	TRUE	TRUE	The voting system software code shall use uniform calling sequences. All parameters shall either be validated for type and range on entry into each unit or the unit comments shall explicitly identify the type and range for the reference of the programmer and tester. Validation may be performed implicitly by the compiler or explicitly by the programmer.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	402	TRUE	TRUE	TRUE	Where code generators are used, the voting system software source file segments provided by the code generators shall be marked as such with comments defining the logic invoked and, a copy of the source code provided to the accredited test lab with the generated source code replaced with an unexpanded macro call or its equivalent.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	403	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Language keywords shall not be used as names of objects, functions, procedures, variables or in any manner not consistent with the design of the language.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	404	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes UNBOUNDED ARRAYS OR STRINGS (INCLUDES BUFFERS USED TO MOVE DATA, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	405	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes POINTER VARIABLES, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	406	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Private Array-Typed Field Returned from a Public Method;	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	407	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	Software	Not Applicable	
zz - Not Applicable	AE4-P3	408	TRUE	TRUE	TRUE	The voting system software code shall not use macros that contain returns or pass control beyond the next statement.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	409	TRUE	TRUE	TRUE	The voting system software code shall have the return explicitly defined for callable units such as functions or procedures (do not drop through by default) for C-based languages and others to which this applies, and in the case of functions, has the return value explicitly assigned. Where the return is only expected to return a successful value, the C convention of returning zero shall be used. If an uncorrected error occurs so the unit shall return without correctly completing its objective, a non-zero return value shall be given even if there is no expectation of testing the return. An exception may be made where the return value of the function has a data range including zero.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	410	TRUE	TRUE	TRUE	For those languages with pointers or which provide for specifying absolute memory locations, the voting system software shall provide controls that prevent the pointer or address from being used to overwrite executable instructions or to access inappropriate areas where vote counts or audit records are stored.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	411	TRUE	TRUE	TRUE	The use of the FOR loop shall avoid common errors such as a loop that never ends. The GENERAL LOOP shall not be used where one of the other loop structures will serve. However, if defined in the language, it may be useful in defining some loops where the exit needs to occur in the middle. Also, in other languages the GENERAL LOOP logic may be used to simulate the other control constructs. The use of the GENERAL LOOP shall require the strict enforcement of coding conventions to avoid problems.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	412	TRUE	TRUE	TRUE	A special case of the GENERAL LOOP is the FOR loop. The FOR loop may be programmed as a DO-WHILE loop. The FOR loop shall execute on a counter. The control FOR statement shall define a counter variable or variables, a test for ending the loop, and a standard method of changing the variable(s) on each pass such as incrementing or decrementing.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	413	TRUE	TRUE	TRUE	As of March 31, 2008 all voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security.: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSG. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes the following features, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	414	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Process flow within the modules shall be restricted to combinations of the control structures defined below. This apply to any language feature where program control passes from one activity to the next, such as control scripts, object methods or sets of executable statements, even though the la	Software	Not Applicable	
zz - Not Applicable	AE4-P3	415	TRUE	TRUE	TRUE	For those languages with unbound arrays, the voting system software shall provide controls to prevent writing beyond the array, string, or buffer boundaries.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	416	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: Each module shall have a single entry point, and a single exit point, for normal process flow. For library modules or languages such as the object-oriented languages, the entry point is to the individual contained module or method invoked. The single exit point is the point where control is re	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	417	TRUE	TRUE	TRUE	By March 31, 2008, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after March 31, 2008: All required resources, such as data accessed by the module, should either be contained within the module or explicitly identified as input or output to the module. Within the constraints of the programming language, such resources shall be placed at the lowest level where shared access is	Software	Not Applicable	
zz - Not Applicable	AE4-P3	418	TRUE	TRUE	TRUE	By 3/31/08, all voting systems submitted for certification shall have application software designed in a modular fashion. COTS software is not required to be inspected for compliance with this requirement. For the purpose of this requirement, "modules" may be compiled or interpreted independently. Modules may also be nested. The modularity rules described here apply to the component sub-modules of a library. The principle to be followed is that the module contains all the elements to compile or interpret successfully and has limited access to data in other modules. The design concept is simple replacement with another module whose interfaces match the original module. All modules shall be designed in accordance with the following requirements for systems submitted for certification after 3/31/08: Each module shall have a specific function that can be tested and verified independently of the remainder of the code. In practice, some additional modules (such as library modules) may be needed to compile the module under test, but the modular construction allows the supporting modules to be	Software	Not Applicable	
zz - Not Applicable	AE4-P3	419	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names used in code and in documentation shall be consistent.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	420	TRUE	TRUE	TRUE	Each module shall be uniquely and mnemonically named, using names that differ by more than a single character. In addition to the unique name, the modules shall include a set of header comments identifying the module's purpose, design, conditions, and version history, followed by the operational code. Headers are optional for modules of fewer than ten executable lines where the subject module is embedded in a larger module that has a header containing the header information. Library modules shall also have a header comment describing the purpose of the library and version information.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	421	TRUE	TRUE	TRUE	The voting system software shall contain no more than one executable statement and no more than one flow control statement for each line of source code.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	422	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: The purpose of the unit and how it works.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	423	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Names shall be unique within an application. Names shall differ by more than a single character. All single-character names are forbidden except those for variables used as loop indexes. In large systems where subsystems tend to be developed independently, duplicate names may be used where the scope of the name is unique within the application. Names shall always be unique where modules are shared.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	424	TRUE	TRUE	TRUE	As of March 31, 2008 All voting system software submitted for certification shall be in compliance with known software coding standards applicable to the base language of the application. The voting system shall meet the following minimum requirements for software security: Self-modifying, dynamically loaded or interpreted code is prohibited, except under the security provisions outlined in the VVSC. External modification of code during execution shall be prohibited. Where the development environment (programming language and development tools) includes DYNAMIC MEMORY ALLOCATION AND MANAGEMENT, the software shall provide controls to prevent accidental or deliberate attempts to replace executable code.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	425	TRUE	TRUE	TRUE	The voting system software shall have no line of code exceeding 80 columns in width (including comments and tab expansions) without justification.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	426	TRUE	TRUE	TRUE	Excluding code generated by commercial code generators, the voting system software code is written in small and easily identifiable modules, with no more than 50% of all modules exceeding 60 lines in length, no more than 5% of all modules exceeding 120 lines in length, and no modules exceeding 240 lines in length. "Lines" in this context, are defined as executable statements or flow control statements with suitable formatting and comments. The reviewer should consider the use of formatting, such as blocking into readable units, which supports the intent of this requirement where the module itself exceeds the limits.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	427	TRUE	TRUE	TRUE	The voting system software code shall be indented consistently and clearly to indicate logical levels.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	428	TRUE	TRUE	TRUE	The voting system software shall provide controls to prevent any vote counter from overflowing. Assuming the counter size is large enough such that the value will never be reached does not meet this requirement.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	429	TRUE	TRUE	TRUE	For those languages supporting case statements, the voting system software shall have a default choice explicitly defined to catch values not included in the case list.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	430	TRUE	TRUE	TRUE	Operator intervention or logic that evaluates received or stored data shall not redirect program control within a program routine. Program control may be redirected within a routine by calling subroutines, procedures, and functions, and by interrupt service routines and exception handlers (due to abnormal error conditions). Do-While (False) constructs and intentional exceptions (used as GoTos) are prohibited.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	431	TRUE	TRUE	TRUE	Upon exit() at any point, the voting system software shall present a message to the operator indicating the reason for the exit().	Software	Not Applicable	
zz - Not Applicable	AE4-P3	432	TRUE	TRUE	TRUE	The voting system software shall initialize every variable upon declaration where permitted.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	433	TRUE	TRUE	TRUE	In languages where embedded executable statements are permitted in conditional expressions, the single embedded statement may be considered a part of the conditional expression. Any additional executable statements should be split out to other lines.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	434	TRUE	TRUE	TRUE	The voting system software shall avoid mixed-mode operations. If mixed mode usage is necessary, then all uses shall be identified and clearly explained by comments.	Software	Not Applicable	

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Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	435	TRUE	TRUE	TRUE	The voting system software shall use separate and consistent formats to distinguish between normal status and error or exception messages. All messages shall be self-explanatory and shall not require the operator to perform any look-up to interpret them, except for error messages that require resolution by a trained technician.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	436	TRUE	TRUE	TRUE	The voting system software shall reference variables by fewer than five levels of indirection.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	437	TRUE	TRUE	TRUE	The voting system software shall have functions with fewer than six levels of indented scope, counted as follows: <pre> int function() { 1 { if (a = true) 2 { if (b = true) 3 { if (d = true) 4 { while(e > 0) 5 { code } } } } } } </pre>	Software	Not Applicable	
zz - Not Applicable	AE4-P3	438	TRUE	TRUE	TRUE	Control Constructs within the modules shall be limited to the acceptable constructs of Sequence, If-Then-Else, Do-While, Do-Until, Case, and the General Loop (including the special case for loop). If the programming language used does not provide these control constructs, the vendor shall provide comparable control structure logic. The constructs shall be used consistently throughout the code. No other constructs shall be used to control program logic and execution.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	439	TRUE	TRUE	TRUE	The voting system software shall have all assert() statements coded such that they are absent from a production compilation. Such coding may be implemented by #ifdefs that remove them from or include them in the compilation. If implemented, the initial program identification in setup should identify that assert() is enabled and active as a test version.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	440	TRUE	TRUE	TRUE	The voting system software shall only contain the minimum implementation of the "a = b ? c : d" syntax. Expansions such as "a?(b?c:d);" are prohibited.	Software	Not Applicable	

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Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	441	TRUE	TRUE	TRUE	The voting system software shall have all constants other than 0 and 1 defined or enumerated, or shall have a comment which clearly explains what each constant means in the context of its use. Where "0" and "1" have multiple meanings in the code unit, even they shall be identified.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	442	TRUE	TRUE	TRUE	While some programming languages do not create programs as linear processes, stepping from an initial condition through changes to a conclusion, the program components nonetheless contain procedures (such as "methods" in object-oriented languages). In these programming languages, the procedures shall execute through these control constructs or their equivalents, as defined and provided by the vendor.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	443	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper Null Termination.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	444	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: A description of input parameters and outputs.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	445	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unintentional pointer scaling;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	446	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Uninitialized variable;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	447	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Use After Free;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	448	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Double Free;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	449	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Resource Injection;	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	450	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Memory Leaks;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	451	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: OS Command Injection (also called "Shell Injection");	Software	Not Applicable	
zz - Not Applicable	AE4-P3	452	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unchecked Error Condition.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	453	TRUE	TRUE	TRUE	The Application shall not open database tables for direct editing.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	454	TRUE	TRUE	TRUE	All comments shall be formatted in a uniform manner that makes it easy to distinguish them from executable code.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	455	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Format string vulnerability;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	456	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Heap Overflow;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	457	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Stack Overflow;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	458	TRUE	TRUE	TRUE	All modules of the voting system software shall adhere to basic coding conventions. The vendors shall identify the published, reviewed, and industry-accepted coding conventions used.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	459	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Unrestricted Critical Resource Lock;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	460	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: String Management / Manipulation.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	461	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following API abuses in accordance with section 45.5.2.4.3: Heap Inspection	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	462	TRUE	TRUE	TRUE	All modules of the voting system software shall use the following naming conventions: Object, function, procedure, and variable names shall be chosen to enhance the readability and intelligibility of the program. Names shall be selected so that their parts of speech represent their use, such as nouns to represent objects and verbs to represent functions.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	463	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Time-of-check/Time-of-use race condition;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	464	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. If software is resident in the system as firmware, the vendor shall require and state in the system documentation that every device is to be retested to validate each ROM prior to the start of elections operations.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	465	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Overflow of static internal buffer;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	466	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Improper pointer subtraction;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	467	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Public Data Assigned to Private Array-Typed Field;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	468	TRUE	TRUE	TRUE	In-line comments shall be provided to facilitate interpretation of functional operations, tests, and branching.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	469	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Cross Site Scripting.Basic X;	Software	Not Applicable	
zz - Not Applicable	AE4-P3	470	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: Path manipulation;	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	471	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. After initiation of election day testing, no source code or compilers or assemblers shall be resident or accessible.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	472	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The election-specific programming may be installed and resident as firmware, provided that such firmware is installed on a component (such as a computer chip) other than the component on which the operating system resides.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	473	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Null Dereference.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	474	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. To prevent alteration of executable code, no software shall be permanently installed or resident in the voting system unless the system documentation states that the jurisdiction shall provide a secure physical and procedural environment for the storage, handling, preparation, and transportation of the system hardware.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	475	TRUE	TRUE	TRUE	Using the replacement rule to replace one or both of the processes in the Sequence construct with other Sequence constructs, a large block of sequential code may be formed. The entire chain is recognized as a Sequence construct and is sometimes called a BLOCK construct. Sequences shall be marked with special symbols or punctuation to delimit where it starts and where it ends.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	476	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following encapsulation conditions in accordance with section 45.5.2.4.3: Leftover Debug Code.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	477	TRUE	TRUE	TRUE	Assembly code shall contain descriptive and informative comments such that its executable lines can be clearly understood.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	478	TRUE	TRUE	TRUE	Independent analysis will test for the following conditions and report on absence or presence of the following input validations in accordance with section 45.5.2.4.3: SQL Injection.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	AE4-P3	479	TRUE	TRUE	TRUE	Descriptive comments shall be provided to identify objects and data types. All variables shall have comments at the point of declaration clearly explaining their use. Where multiple variables that share the same meaning are required, the variables may share the same comment.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	480	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Date of creation and a revision record.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	481	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Global variables used.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	482	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: File references by name and method of access (i.e., read, write, modify or append).	Software	Not Applicable	
zz - Not Applicable	AE4-P3	483	TRUE	TRUE	TRUE	All modules shall contain headers. For small modules of 10 lines or less, the header may be limited to identification of unit and revision information. Other header information should be included in the small unit headers if not clear from the actual lines of code. Header comments shall provide the following information: Other units called and the calling sequence.	Software	Not Applicable	
zz - Not Applicable	AE4-P3	484	TRUE	TRUE	TRUE	All modules of the system shall meet the following requirements for installation of software, including hardware with embedded firmware. The voting system bootstrap, monitor, and device-controller software may be resident permanently as firmware, provided that this firmware has been shown to be inaccessible to activation or control by any means other than by the authorized initiation and execution of the vote counting program, and its associated exception handlers.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	BA1-P3	102	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: Voting system provider shall not have administrative account, or administrative account access.	DRE	Fail	
zz - Not Applicable	BA1-P3	103	TRUE	TRUE	TRUE	By 3/31/08 all voting systems being submitted for certification shall have all components of voting system capable of supporting passwords of a minimum of 8 characters, which shall be capable of including numeric, alpha and special characters in upper case or lower case used in any combination.	DRE	Not Applicable	
04 - Fail	BA1-P3	107	TRUE	TRUE	TRUE	The use of blank or empty passwords shall not be permitted at any time with the exception of a limited one-time use startup password which requires a new password to be assigned before the system can be used.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - Requirement is no use of blank or empty passwords - Observation is that no password is used.
04 - Fail	BA1-P3	111	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: All passwords shall be stored and used in a non-reversible format;	DRE	Not Applicable	Category 2 - Questionable interpretation of the requirement - Note Inconsistency with interpretation in BA2-P3 213 - Requirement is passwords must be in non reversible format - Observation is that no password is used.
04 - Fail	BA1-P3	112	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The application's database management system shall require separate passwords for the administrative and each user/operator accounts with access to the application.	DRE	Not Applicable	Category 2 - Questionable interpretation of the requirement - The Database Management System is in WinEDS not in the DRE Device
01 - Pass	BA1-P3	113	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The system shall be designed in such a way that the use of any administrative account password shall not be required for normal operating functions at any remote location.	DRE	Pass	
04 - Fail	BA1-P3	114	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The system shall be designed in such a way to facilitate the changing of passwords for each election cycle.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - The Requirement is the ability to change passwords that exist - The observation is that no password is required
04 - Fail	BA2-P3	201	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: Voting system provider shall not have administrative account, or administrative account access.	PCOS	Fail	
04 - Fail	BA2-P3	202	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The application's database management system shall require separate passwords for the administrative and each user/operator accounts with access to the application.	PCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - The Database Management System is in WinEDS not in the Precinct OS Device

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	BA2-P3	203	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The system shall be designed in such a way that the use of any administrative account password shall not be required for normal operating functions at any remote location.	PCOS	Pass	
04 - Fail	BA2-P3	208	TRUE	TRUE	TRUE	The use of blank or empty passwords shall not be permitted at any time with the exception of a limited one-time use startup password which requires a new password to be assigned before the system can be used.	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Requirement is no use of blank or empty passwords - Observation is that no password is used.
zz - Not Applicable	BA2-P3	209	TRUE	TRUE	TRUE	By 3/31/08 all voting systems being submitted for certification shall have all components of voting system capable of supporting passwords of a minimum of 8 characters, which shall be capable of including numeric, alpha and special characters in upper case or lower case used in any combination.	PCOS	Not Applicable	
04 - Fail	BA2-P3	211	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The system shall be designed in such a way to facilitate the changing of passwords for each election cycle.	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - The Requirement is the ability to change passwords that exist - The observation is that no password is required
zz - Not Applicable	BA2-P3	213	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: All passwords shall be stored and used in a non-reversible format;	PCOS	Not Applicable	
04 - Fail	BA3-P3	306	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: Voting system provider shall not have administrative account, or administrative account access.	CCOS	Fail	
zz - Not Applicable	BA3-P3	308	TRUE	TRUE	TRUE	By 3/31/08 all voting systems being submitted for certification shall have all components of voting system capable of supporting passwords of a minimum of 8 characters, which shall be capable of including numeric, alpha and special characters in upper case or lower case used in any combination.	CCOS	Not Applicable	
04 - Fail	BA3-P3	311	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: All passwords shall be stored and used in a non-reversible format;	CCOS	Fail	
04 - Fail	BA3-P3	312	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The application's database management system shall require separate passwords for the administrative and each user/operator accounts with access to the application.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is there a Database Management System in the 400-C

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	BA3-P3	313	TRUE	TRUE	TRUE	The use of blank or empty passwords shall not be permitted at any time with the exception of a limited one-time use startup password which requires a new password to be assigned before the system can be used.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Requirement is no use of blank or empty passwords - Observation is that only the Windows environment handles the passwords
04 - Fail	BA3-P3	314	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The system shall be designed in such a way to facilitate the changing of passwords for each election cycle.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - The Requirement is the ability to change passwords. - The observation is that passwords are handled through the Windows environment.
01 - Pass	BA4-P3	401	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: A unique System User/operator account shall be created for operating system use that is restricted from the following aspects of the operating system: No access to modify other user/operator accounts on the system.	Software	Pass	
01 - Pass	BA4-P3	402	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The system shall be designed in such a way to facilitate the changing of passwords for each election cycle.	Software	Pass	
01 - Pass	BA4-P3	403	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: A unique application administrative account shall be created which has full access and rights to the application and database;	Software	Pass	
zz - Not Applicable	BA4-P3	404	TRUE	TRUE	TRUE	By 3/31/08 all voting systems being submitted for certification shall have all components of voting system capable of supporting passwords of a minimum of 8 characters, which shall be capable of including numeric, alpha and special characters in upper case or lower case used in any combination.	Software	Not Applicable	
01 - Pass	BA4-P3	405	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: All passwords shall be stored and used in a non-reversible format;	Software	Pass	
01 - Pass	BA4-P3	406	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: The operating system administrative account does not have access to the database and does not have the ability or knowledge of the database administrator password;	Software	Pass	
01 - Pass	BA4-P3	407	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: The application's database management system shall require separate passwords for the administrative and each user/operator accounts with access to the application.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	BA4-P3	408	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: A unique application user/operator account shall be created with limited rights specifically designed to perform functional operation within the scope of the application. This user/operator shall be restricted in the creation or modification of any user/operator accounts.	Software	Fail	
04 - Fail	BA4-P3	409	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: A unique System User/operator account shall be created for operating system use that is restricted from the following aspects of the operating system: No access to install or remove programs.	Software	Fail	
01 - Pass	BA4-P3	410	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: Voting system provider shall not have administrative account, or administrative account access.	Software	Pass	
04 - Fail	BA4-P3	411	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: Password to database shall be owned and only known by application;	Software	Fail	
01 - Pass	BA4-P3	412	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: The operating system administrative account shall not be required to be used by any function of the voting system during normal operations;	Software	Pass	
04 - Fail	BA4-P3	413	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: A unique System User/operator account shall be created for operating system use that is restricted from the following aspects of the operating system: No Access to System Root directory.	Software	Fail	
04 - Fail	BA4-P3	414	TRUE	TRUE	TRUE	The voting system shall accommodate a general system of access by least privilege and role based access control. The following requirements shall apply: A unique System User/operator account shall be created for operating system use that is restricted from the following aspects of the operating system: No access to operating system specific folders.	Software	Fail	

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01 - Pass	BA4-P3	415	TRUE	TRUE	TRUE	The use of blank or empty passwords shall not be permitted at any time with the exception of a limited one-time use startup password which requires a new password to be assigned before the system can be used.	Software	Pass	
04 - Fail	BA4-P3	416	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for password security: Passwords to database shall not be stored in database.	Software	Fail	
zz - Not Applicable	BB1-P3	101	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: If the manufacturer has not established requirements for the specifically designed system, after March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to the voting system providers' specifications.	DRE	Not Applicable	
zz - Not Applicable	BB1-P3	102	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Microsoft Windows XP Operating systems shall be hardened to the NSA Windows XP Security Guide Version: 2.2 and the NSA Windows XP Security Guide Addendum Version 1.0.	DRE	Not Applicable	

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zz - Not Applicable	BB1-P3	103	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Microsoft Windows 2000 operating systems shall be hardened to the following NSA Guides: i. Guide to the Secure Configuration and Administration of Microsoft Internet Information Services 5.0 Version 1.4; ii. Guide to the Secure Configuration and Administration of Microsoft ISA Server 2000 Version 1.5; iii. Guide to Securing Microsoft Windows 2000 Active Directory Version 1.0; iv. Guide to the Secure Configuration and Administration of Microsoft Windows 2000 Certificate Services Version 2.1.1; v. Guide to Securing Microsoft Windows 2000 DHCP Version 1.3; vi. Guide to Securing Microsoft DNS Version 1.0; vii. Guide to Securing Microsoft Windows 2000 Encrypting File System Version 1.0; viii. Guide to Securing Microsoft Windows 2000 File and Disk Resources Version 1.0.1; ix. Guide to securing Microsoft Windows 2000 Group Policy Reference Version 1.0.8; x. Group Policy Reference Version 1.0.8; xi. Guide to Securing Microsoft Windows 2000 Group Policy Reference Version 1.0.8; xii. Microsoft Windows 2000 IPsec Guide Version 1.0; xiii. Guide to Windows 2000 Kerberos Settings Version 1.0.	DRE	Not Applicable	
zz - Not Applicable	BB1-P3	104	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Microsoft Windows Server 2003 operating systems shall be hardened to the NSA Microsoft Windows Server 2003 Security Guide Version 2.1 and The Microsoft Windows Server 2003 Security Guide Addendum Version 1.0.	DRE	Not Applicable	
zz - Not Applicable	BB1-P3	105	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Sun Solaris 8 operating systems shall be hardened to the NSA Guide to the Secure Configuration of Solaris 8 Version 1.0.	DRE	Not Applicable	

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zz - Not Applicable	BB1-P3	106	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Sun Solaris 9 operating systems shall be hardened to the NSA Guide to the Secure Configuration of Solaris 9 Version 1.0.	DRE	Not Applicable	
zz - Not Applicable	BB1-P3	107	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: a. Apple max OS X systems shall be hardened to the NSA Apple Mac OS X v10.3.x "Panther" Security Configuration Guide Version 1.1;	DRE	Not Applicable	
zz - Not Applicable	BB1-P3	108	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: All other voting system operating systems submitted for certification after March 31, 2008 shall have all operating systems hardened to existing manufacturer's hardening requirements.	DRE	Not Applicable	
zz - Not Applicable	BB1-P3	109	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Apple Server Operating Systems shall be hardened to the NSA Apple Mac OS X Server v10.3.x "Panther" Security Configuration Guide.	DRE	Not Applicable	
04 - Fail	BB4-P3	401	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: The voting system provider shall use a virus protection/prevention application on the election management server(s) /workstations which shall be capable of manual updates without the use of the internet.	Software	Fail	
zz - Not Applicable	BB4-P3	402	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: All other voting system operating systems submitted for certification after March 31, 2008 shall have all operating systems hardened to existing manufacturer's hardening requirements.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BB4-P3	403	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Sun Solaris 8 operating systems shall be hardened to the NSA Guide to the Secure Configuration of Solaris 8 Version 1.0.	Software	Not Applicable	
zz - Not Applicable	BB4-P3	404	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Apple Server Operating Systems shall be hardened to the NSA Apple Mac OS X Server v10.3.x "Panther" Security Configuration Guide.	Software	Not Applicable	
zz - Not Applicable	BB4-P3	405	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Microsoft Windows XP Operating systems shall be hardened to the NSA Windows XP Security Guide Version 2.2 and the NSA Windows XP Security Guide Addendum Version 1.0.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BB4-P3	406	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Microsoft Windows 2000 operating systems shall be hardened to the following NSA Guides: i. Guide to the Secure Configuration and Administration of Microsoft Internet Information Services 5.0 Version 1.4; ii. Guide to the Secure Configuration and Administration of Microsoft ISA Server 2000 Version 1.5; iii. Guide to Securing Microsoft Windows 2000 Active Directory Version 1.0; iv. Guide to the Secure Configuration and Administration of Microsoft Windows 2000 Certificate Services Version 2.1.1; v. Guide to Securing Microsoft Windows 2000 DHCP Version 1.3; vi. Guide to Securing Microsoft DNS Version 1.0; vii. Guide to Securing Microsoft Windows 2000 Encrypting File System Version 1.0; viii. Guide to Securing Microsoft Windows 2000 File and Disk Resources Version 1.0.1; ix. Guide to securing Microsoft Windows 2000 Group Policy Reference Version 1.0.8; x. Guide to Securing Microsoft Windows 2000 Group Policy Reference Version 1.0.8; xi. Microsoft Windows 2000 IPSec Guide Version 1.0; xii. Guide to Windows 2000 Kerberos Settings Version 1.0.	Software	Not Applicable	
zz - Not Applicable	BB4-P3	407	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: a. Apple max OS X systems shall be hardened to the NSA Apple Mac OS X v10.3.x "Panther" Security Configuration Guide Version 1.1;	Software	Not Applicable	
zz - Not Applicable	BB4-P3	408	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Microsoft Windows Server 2003 operating systems shall be hardened to the NSA Microsoft Windows Server 2003 Security Guide Version 2.1 and The Microsoft Windows Server 2003 Security Guide Addendum Version 1.0.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BB4-P3	409	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: After March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to NSA guidelines for operating systems as follows: Sun Solaris 9 operating systems shall be hardened to the NSA Guide to the Secure Configuration of Solaris 9 Version 1.0.	Software	Not Applicable	
zz - Not Applicable	BB4-P3	410	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: If the manufacturer has not established requirements for the specifically designed system, after March 31, 2008, all voting systems being submitted for certification shall have all operating systems hardened to the voting system providers' specifications.	Software	Not Applicable	
04 - Fail	BB4-P3	411	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for operating system security: The voting system provider shall configure the voting system operating system of the workstation and/or server used for the election management software to the following requirements: a. The ability for the system to take an action upon inserting a removable media (Autorun) shall be disabled; and b. The voting system shall only boot from the drive or device identified as the primary drive. The voting system shall not boot from any alternative device.	Software	Fail	
zz - Not Applicable	BC1-P3	101	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: All other voting system databases submitted for certification shall have the voting systems databases hardened to database manufacturer's existing hardening requirements.	DRE	Not Applicable	
zz - Not Applicable	BC1-P3	102	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 If manufacturer's requirements do not exist for the specifically designed system, the voting systems submitted for certification shall have the voting systems databases hardened to the database vendors specifications.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BC1-P3	103	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: All voting systems submitted for certification shall have all voting systems databases restricted to allowing access to database authentication from application only (or through application only).	DRE	Not Applicable	
zz - Not Applicable	BC1-P3	104	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: All data stored at rest in any voting system database shall be encrypted in accordance with section (vi) of this requirement.	DRE	Not Applicable	
zz - Not Applicable	BC1-P3	105	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 All Cryptography modules shall be documented by the voting system vendor to be certified to US Federal Information Processing Standard (FIPS-140-2), and validated to FIPS 180 standards.	DRE	Not Applicable	
zz - Not Applicable	BC1-P3	106	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: (i) All voting systems submitted for certification using Oracle 9i, Oracle 10g, or Microsoft SQL shall be hardened to the existing and published NSA guidelines for databases as follows: (A) Oracle 9i and Oracle 10g databases shall be hardened to the Center for Internet Security Benchmark for Oracle 9i/10g Ver. 2.0; (B) Microsoft SQL databases shall be hardened to the NSA Guide to the Secure Configuration and Administration of Microsoft SQL Server 2000.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BC2-P3	201	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> (i) All voting systems submitted for certification using Oracle 9i, Oracle 10g, or Microsoft SQL shall be hardened to the existing and published NSA guidelines for databases as follows: <ul style="list-style-type: none"> (A) Oracle 9i and Oracle 10g databases shall be hardened to the Center for Internet Security Benchmark for Oracle 9i/10g Ver. 2.0; (B) Microsoft SQL databases shall be hardened to the NSA Guide to the Secure Configuration and Administration of Microsoft SQL Server 2000. 	PCOS	Not Applicable	
zz - Not Applicable	BC2-P3	202	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 If manufacturer's requirements do not exist for the specifically designed system, the voting systems submitted for certification shall have the voting systems databases hardened to the database vendors specifications.	PCOS	Not Applicable	
zz - Not Applicable	BC2-P3	203	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All data stored at rest in any voting system database shall be encrypted in accordance with section (vi) of this requirement. 	PCOS	Not Applicable	
zz - Not Applicable	BC2-P3	204	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 All Cryptography modules shall be documented by the voting system vendor to be certified to US Federal Information Processing Standard (FIPS-140-2), and validated to FIPS 180 standards.	PCOS	Not Applicable	
zz - Not Applicable	BC2-P3	205	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All voting systems submitted for certification shall have all voting systems databases restricted to allowing access to database authentication from application only (or through application only). 	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BC2-P3	206	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All other voting system databases submitted for certification shall have the voting systems databases hardened to database manufacturer's existing hardening requirements. 	PCOS	Not Applicable	
zz - Not Applicable	BC3-P3	301	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> (i) All voting systems submitted for certification using Oracle 9i, Oracle 10g, or Microsoft SQL shall be hardened to the existing and published NSA guidelines for databases as follows: <ul style="list-style-type: none"> (A) Oracle 9i and Oracle 10g databases shall be hardened to the Center for Internet Security Benchmark for Oracle 9i/10g Ver. 2.0; (B) Microsoft SQL databases shall be hardened to the NSA Guide to the Secure Configuration and Administration of Microsoft SQL Server 2000. 	CCOS	Not Applicable	
zz - Not Applicable	BC3-P3	302	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All voting systems submitted for certification shall have all voting systems databases restricted to allowing access to database authentication from application only (or through application only). 	CCOS	Not Applicable	
zz - Not Applicable	BC3-P3	303	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All other voting system databases submitted for certification shall have the voting systems databases hardened to database manufacturer's existing hardening requirements. 	CCOS	Not Applicable	
zz - Not Applicable	BC3-P3	304	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 All Cryptography modules shall be documented by the voting system vendor to be certified to US Federal Information Processing Standard (FIPS-140-2), and validated to FIPS 180 standards.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BC3-P3	305	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All data stored at rest in any voting system database shall be encrypted in accordance with section (vi) of this requirement. 	CCOS	Not Applicable	
zz - Not Applicable	BC3-P3	306	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 If manufacturer's requirements do not exist for the specifically designed system, the voting systems submitted for certification shall have the voting systems databases hardened to the database vendors specifications.	CCOS	Not Applicable	
zz - Not Applicable	BC4-P3	401	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All voting systems submitted for certification shall have all voting systems databases restricted to allowing access to database authentication from application only (or through application only). 	Software	Not Applicable	
zz - Not Applicable	BC4-P3	402	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> (i)All voting systems submitted for certification using Oracle 9i, Oracle 10g, or Microsoft SQL shall be hardened to the existing and published NSA guidelines for databases as follows: <ul style="list-style-type: none"> (A)Oracle 9i and Oracle 10g databases shall be hardened to the Center for Internet Security Benchmark for Oracle 9i/10g Ver. 2.0; (B)Microsoft SQL databases shall be hardened to the NSA Guide to the Secure Configuration and Administration of Microsoft SQL Server 2000. 	Software	Not Applicable	
zz - Not Applicable	BC4-P3	403	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 If manufacturer's requirements do not exist for the specifically designed system, the voting systems submitted for certification shall have the voting systems databases hardened to the database vendors specifications.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BC4-P3	404	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All data stored at rest in any voting system database shall be encrypted in accordance with section (vi) of this requirement. 	Software	Not Applicable	
zz - Not Applicable	BC4-P3	405	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for database security: After March 31, 2008 All Cryptography modules shall be documented by the voting system vendor to be certified to US Federal Information Processing Standard (FIPS-140-2), and validated to FIPS 180 standards.	Software	Not Applicable	
zz - Not Applicable	BC4-P3	406	TRUE	TRUE	TRUE	After March 31, 2008 all voting systems submitted for certification shall meet the following requirements for database security: <ul style="list-style-type: none"> All other voting system databases submitted for certification shall have the voting systems databases hardened to database manufacturer's existing hardening requirements. 	Software	Not Applicable	
zz - Not Applicable	BD1-P3	101	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All non-voting data stored shall be authenticated, validated and encrypted in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	DRE	Not Applicable	
zz - Not Applicable	BD1-P3	102	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All voting data stored which includes vote records, ballot images, tally data and cast votes, shall be authenticated and validated in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	DRE	Not Applicable	
04 - Fail	BD1-P3	103	TRUE	TRUE	TRUE	If a vote tabulation device employs the use of removable memory storage devices, the devices shall allow for an alternate method of transfer of audit records if the device and/or memory storage device is damaged or destroyed.	DRE	Fail	
zz - Not Applicable	BD2-P3	201	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All non-voting data stored shall be authenticated, validated and encrypted in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BD2-P3	202	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All voting data stored which includes vote records, ballot images, tally data and cast votes, shall be authenticated and validated in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	PCOS	Not Applicable	
04 - Fail	BD2-P3	203	TRUE	TRUE	TRUE	If a vote tabulation device employs the use of removable memory storage devices, the devices shall allow for an alternate method of transfer of audit records if the device and/or memory storage device is damaged or destroyed.	PCOS	Fail	
zz - Not Applicable	BD3-P3	301	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All non-voting data stored shall be authenticated, validated and encrypted in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	CCOS	Not Applicable	
zz - Not Applicable	BD3-P3	302	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All voting data stored which includes vote records, ballot images, tally data and cast votes, shall be authenticated and validated in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	CCOS	Not Applicable	
01 - Pass	BD3-P3	303	TRUE	TRUE	TRUE	If a vote tabulation device employs the use of removable memory storage devices, the devices shall allow for an alternate method of transfer of audit records if the device and/or memory storage device is damaged or destroyed.	CCOS	Pass	
zz - Not Applicable	BD4-P3	401	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All non-voting data stored shall be authenticated, validated and encrypted in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BD4-P3	402	TRUE	TRUE	TRUE	As of March 31 2008, voting systems submitted for certification shall meet the following minimum requirements for removable storage media with data controls: All voting data stored which includes vote records, ballot images, tally data and cast votes, shall be authenticated and validated in accordance with cryptography requirements of subsection (c)(vi) of this requirement;	Software	Not Applicable	
01 - Pass	BD4-P3	403	TRUE	TRUE	TRUE	If a vote tabulation device employs the use of removable memory storage devices, the devices shall allow for an alternate method of transfer of audit records if the device and/or memory storage device is damaged or destroyed.	Software	Pass	
04 - Fail	BD4-P3	404	TRUE	TRUE	TRUE	Antivirus software shall be present and scan removable media upon insertion of media or media device on server and/or workstations hosting the elections management software.	Software	Fail	
01 - Pass	BE1-P3	101	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: The voting system shall be tested to contain provisions for updating security patches, software and/or service packs without access to the open network.	DRE	Pass	
02 - Pass Conditional	BE1-P3	102	TRUE	TRUE	TRUE	The reporting subsystem contains all mechanical, electromechanical, and electronic devices required to print reports of the tabulation. The subsystem also may include data storage media and communications devices for transportation or transmission of data to other sites. Communications Devices shall not be used for the preparation or printing of an official canvass of the vote unless they conform to a data interchange and interface structure and protocol that incorporates auditing and error checking as required by 45.5.2.7.	DRE	Conditional Pass	
zz - Not Applicable	BE1-P3	103	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall only be operated on a closed network only for the use of the voting system;	DRE	Not Applicable	
zz - Not Applicable	BE1-P3	104	TRUE	TRUE	TRUE	Failure and recovery of transmissions shall not cause any error in data transmitted from the polling place to the central election site during a recovered transmission session.	DRE	Not Applicable	
zz - Not Applicable	BE1-P3	105	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall include the limited use of non-routable IP address configurations for any device connected to the closed network. For the purposes of this requirement non-routable IP addresses are those defined in the RFC 1918 Address base;	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BE1-P3	106	TRUE	TRUE	TRUE	In any situation in which the voting system provider's system transmits data through any telecommunications medium, the system shall be able to recover, either automatically or with manual intervention, from incomplete or failed transmission sessions and resume transmissions automatically when telecommunications are re-established.	DRE	Not Applicable	
04 - Fail	BE1-P3	107	TRUE	TRUE	TRUE	All electronic transmissions from a voting system shall meet the following minimum standards: Modems from remote devices shall be "dial only" and cannot be programmed to receive a call;	DRE	Indeterminable	Category 5 - Observations do not support the Status - Requirement is modems shall be dial only and cannot receive a call - Finding is device is restricted from remote connections.
04 - Fail	BE1-P3	108	TRUE	TRUE	TRUE	All electronic transmissions from a voting system shall meet the following minimum standards: All communications of data in transfer shall be encrypted, authenticated and verified to the Fips 140-2 standard and verified to the FIPS 180 standard.	DRE	Indeterminable	Category 5 - Observations do not support the Status - Requirement is for encryption of communications - Finding is device is restricted from remote connections.
01 - Pass	BE1-P3	109	TRUE	TRUE	TRUE	All wireless components on voting systems shall be disabled with the exception of line of sight infrared technology used in a closed environment where the transmission and reception is shielded from external infrared signals and can only accept infrared signals generated from within the system.	DRE	Pass	
zz - Not Applicable	BE1-P3	110	TRUE	TRUE	TRUE	All systems that transmit data over public telecommunications networks shall maintain a clear audit trail that can be provided to the Secretary of State when election results are transmitted by telephone, microwave or any other type of electronic communication.	DRE	Not Applicable	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
zz - Not Applicable	BE1-P3	111	TRUE	TRUE	TRUE	Systems designed for transmission of voter information (i.e. electronic pollbooks) over public networks shall meet security standards that address the security risks attendant with the casting of ballots at remote sites controlled by election officials using the voting system configured and installed by election officials and/or their voting system provider or contractor, and using in-person authentication of individual voters.	DRE	Not Applicable	
zz - Not Applicable	BE1-P3	112	TRUE	TRUE	TRUE	Recovery of transmissions shall include notations of the interrupted transmission session and the resumed transmission session in the system and application transaction logs.	DRE	Not Applicable	
zz - Not Applicable	BE2-P3	201	TRUE	TRUE	TRUE	Recovery of transmissions shall include notations of the interrupted transmission session and the resumed transmission session in the system and application transaction logs.	PCOS	Not Applicable	
02 - Pass Conditional	BE2-P3	202	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall only be operated on a closed network only for the use of the voting system;	PCOS	Conditional Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BE2-P3	203	TRUE	TRUE	TRUE	In any situation in which the voting system provider's system transmits data through any telecommunications medium, the system shall be able to recover, either automatically or with manual intervention, from incomplete or failed transmission sessions and resume transmissions automatically when telecommunications are re-established.	PCOS	Not Applicable	
zz - Not Applicable	BE2-P3	204	TRUE	TRUE	TRUE	All electronic transmissions from a voting system shall meet the following minimum standards: Modems from remote devices shall be "dial only" and cannot be programmed to receive a call;	PCOS	Not Applicable	
zz - Not Applicable	BE2-P3	205	TRUE	TRUE	TRUE	The reporting subsystem contains all mechanical, electromechanical, and electronic devices required to print reports of the tabulation. The subsystem also may include data storage media and communications devices for transportation or transmission of data to other sites. Communications Devices shall not be used for the preparation or printing of an official canvass of the vote unless they conform to a data interchange and interface structure and protocol that incorporates auditing and error checking as required by 45.5.2.7.	PCOS	Not Applicable	
zz - Not Applicable	BE2-P3	206	TRUE	TRUE	TRUE	All electronic transmissions from a voting system shall meet the following minimum standards: All communications of data in transfer shall be encrypted, authenticated and verified to the Fips 140-2 standard and verified to the FIPS 180 standard.	PCOS	Not Applicable	
01 - Pass	BE2-P3	207	TRUE	TRUE	TRUE	All wireless components on voting systems shall be disabled with the exception of line of sight infrared technology used in a closed environment where the transmission and reception is shielded from external infrared signals and can only accept infrared signals generated from within the system.	PCOS	Pass	
zz - Not Applicable	BE2-P3	208	TRUE	TRUE	TRUE	Systems designed for transmission of voter information (i.e. electronic pollbooks) over public networks shall meet security standards that address the security risks attendant with the casting of ballots at remote sites controlled by election officials using the voting system configured and installed by election officials and/or their voting system provider or contractor, and using in-person authentication of individual voters.	PCOS	Not Applicable	
zz - Not Applicable	BE2-P3	209	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall include the limited use of non-routable IP address configurations for any device connected to the closed network. For the purposes of this requirement non-routable IP addresses are those defined in the RFC 1918 Address base;	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	BE2-P3	210	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: The voting system shall be tested to contain provisions for updating security patches, software and/or service packs without access to the open network.	PCOS	Pass	
zz - Not Applicable	BE2-P3	211	TRUE	TRUE	TRUE	Failure and recovery of transmissions shall not cause any error in data transmitted from the polling place to the central election site during a recovered transmission session.	PCOS	Not Applicable	
zz - Not Applicable	BE2-P3	212	TRUE	TRUE	TRUE	All systems that transmit data over public telecommunications networks shall maintain a clear audit trail that can be provided to the Secretary of State when election results are transmitted by telephone, microwave or any other type of electronic communication.	PCOS	Not Applicable	
zz - Not Applicable	BE3-P3	301	TRUE	TRUE	TRUE	Systems designed for transmission of voter information (i.e. electronic pollbooks) over public networks shall meet security standards that address the security risks attendant with the casting of ballots at remote sites controlled by election officials using the voting system configured and installed by election officials and/or their voting system provider or contractor, and using in-person authentication of individual voters.	CCOS	Not Applicable	
zz - Not Applicable	BE3-P3	302	TRUE	TRUE	TRUE	In any situation in which the voting system provider's system transmits data through any telecommunications medium, the system shall be able to recover, either automatically or with manual intervention, from incomplete or failed transmission sessions and resume transmissions automatically when telecommunications are re-established.	CCOS	Not Applicable	
zz - Not Applicable	BE3-P3	303	TRUE	TRUE	TRUE	The reporting subsystem contains all mechanical, electromechanical, and electronic devices required to print reports of the tabulation. The subsystem also may include data storage media and communications devices for transportation or transmission of data to other sites. Communications Devices shall not be used for the preparation or printing of an official canvass of the vote unless they conform to a data interchange and interface structure and protocol that incorporates auditing and error checking as required by 45.5.2.7.	CCOS	Not Applicable	
zz - Not Applicable	BE3-P3	304	TRUE	TRUE	TRUE	Recovery of transmissions shall include notations of the interrupted transmission session and the resumed transmission session in the system and application transaction logs.	CCOS	Not Applicable	
zz - Not Applicable	BE3-P3	305	TRUE	TRUE	TRUE	Failure and recovery of transmissions shall not cause any error in data transmitted from the polling place to the central election site during a recovered transmission session.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BE3-P3	306	TRUE	TRUE	TRUE	All electronic transmissions from a voting system shall meet the following minimum standards: All communications of data in transfer shall be encrypted, authenticated and verified to the Fips 140-2 standard and verified to the FIPS 180 standard.	CCOS	Not Applicable	
zz - Not Applicable	BE3-P3	307	TRUE	TRUE	TRUE	All systems that transmit data over public telecommunications networks shall maintain a clear audit trail that can be provided to the Secretary of State when election results are transmitted by telephone, microwave or any other type of electronic communication.	CCOS	Not Applicable	
01 - Pass	BE3-P3	308	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall only be operated on a closed network only for the use of the voting system.	CCOS	Pass	
01 - Pass	BE3-P3	309	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall include the limited use of non-routable IP address configurations for any device connected to the closed network. For the purposes of this requirement non-routable IP addresses are those defined in the RFC 1918 Address base.	CCOS	Pass	
01 - Pass	BE3-P3	310	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: The voting system shall be tested to contain provisions for updating security patches, software and/or service packs without access to the open network.	CCOS	Pass	
01 - Pass	BE3-P3	311	TRUE	TRUE	TRUE	All wireless components on voting systems shall be disabled with the exception of line of sight infrared technology used in a closed environment where the transmission and reception is shielded from external infrared signals and can only accept infrared signals generated from within the system.	CCOS	Pass	
02 - Pass Conditional	BE4-P3	401	TRUE	TRUE	TRUE	The reporting subsystem contains all mechanical, electromechanical, and electronic devices required to print reports of the tabulation. The subsystem also may include data storage media and communications devices for transportation or transmission of data to other sites. Communications Devices shall not be used for the preparation or printing of an official canvass of the vote unless they conform to a data interchange and interface structure and protocol that incorporates auditing and error checking as required by 45.5.2.7.	Software	Conditional Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	BE4-P3	402	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall include the limited use of non-routable IP address configurations for any device connected to the closed network. For the purposes of this requirement non-routable IP addresses are those defined in the RFC 1918 Address base;	Software	Pass	
01 - Pass	BE4-P3	403	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: All components of the voting system shall only be operated on a closed network only for the use of the voting system;	Software	Pass	
zz - Not Applicable	BE4-P3	404	TRUE	TRUE	TRUE	Systems designed for transmission of voter information (i.e. electronic pollbooks) over public networks shall meet security standards that address the security risks attendant with the casting of ballots at remote sites controlled by election officials using the voting system configured and installed by election officials and/or their voting system provider or contractor, and using in-person authentication of individual voters.	Software	Not Applicable	
zz - Not Applicable	BE4-P3	405	TRUE	TRUE	TRUE	All systems that transmit data over public telecommunications networks shall maintain a clear audit trail that can be provided to the Secretary of State when election results are transmitted by telephone, microwave or any other type of electronic communication.	Software	Not Applicable	
01 - Pass	BE4-P3	406	TRUE	TRUE	TRUE	All wireless components on voting systems shall be disabled with the exception of line of sight infrared technology used in a closed environment where the transmission and reception is shielded from external infrared signals and can only accept infrared signals generated from within the system.	Software	Pass	
zz - Not Applicable	BE4-P3	407	TRUE	TRUE	TRUE	All electronic transmissions from a voting system shall meet the following minimum standards: All communications of data in transfer shall be encrypted, authenticated and verified to the Fips 140-2 standard and verified to the FIPS 180 standard.	Software	Not Applicable	
zz - Not Applicable	BE4-P3	408	TRUE	TRUE	TRUE	Recovery of transmissions shall include notations of the interrupted transmission session and the resumed transmission session in the system and application transaction logs.	Software	Not Applicable	
01 - Pass	BE4-P3	409	TRUE	TRUE	TRUE	The voting system shall meet the following requirements for network security: The voting system shall be tested to contain provisions for updating security patches, software and/or service packs without access to the open network.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	BE4-P3	410	TRUE	TRUE	TRUE	All electronic transmissions from a voting system shall meet the following minimum standards: Modems from remote devices shall be "dial only" and cannot be programmed to receive a call;	Software	Not Applicable	
zz - Not Applicable	BE4-P3	411	TRUE	TRUE	TRUE	Failure and recovery of transmissions shall not cause any error in data transmitted from the polling place to the central election site during a recovered transmission session.	Software	Not Applicable	
01 - Pass	CA1-P3	102	TRUE	TRUE	TRUE	All tests shall be conducted as described in this section 45.6.2.3 in regular election mode. At no point shall testing be conducted in any form of test mode.	DRE	Pass	
04 - Fail	CA1-P3	103	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. The system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Preventing access to vote data, including individual votes and vote totals, to unauthorized individuals.	DRE	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CA1-P3	111	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election. <ul style="list-style-type: none"> □ The ballots shall be printed so as to give to each eligible elector a clear opportunity to designate his or her choice of candidates, joint candidates, ballot issues, and ballot questions by a mark as instructed. On the ballot may be printed words that will aid the elector, such as "vote for not more than one". □ At the end of the list of candidates for each different office shall be one or more blank spaces in which the elector may write the name of any eligible person not printed on the ballot who has filed an affidavit of intent of write-in candidate pursuant to section 1-4-1101. The number of spaces provided shall be the lesser of the number of eligible electors who have properly filed an affidavit of intent of write-in candidate pursuant to section 1-4-1101 or the number of persons to be elected to the office. No such blank spaces shall be provided if no eligible elector properly filed an affidavit of intent of write-in candidate. 	DRE	Pass	
04 - Fail	CA1-P3	113	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to preserve the system for future election use.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for authorized users to preserve the system or for the system to provide user accounts with differing classes authorization?

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CA1-P3	115	TRUE	TRUE	TRUE	The voting system shall have a high level of integration between the ballot layout subsystem and the vote tabulation subsystem. This integration shall permit and facilitate the automatic transfer of all ballot setup information from the automated ballot layout module to the single ballot tabulation system that will be used in a fully integrated manner for DRE, optical scan, and any other voting devices included in the voting system.	DRE	Pass	
04 - Fail	CA1-P3	116	TRUE	TRUE	TRUE	The ballot definition subsystem shall be capable of handling at least 500 potentially active voting positions, arranged to identify party affiliations in a primary election, offices and their associated labels and instructions, candidate names and their associated labels and instructions, and issues or measures and their associated text and instructions.	DRE	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CA1-P3	117	TRUE	TRUE	TRUE	The ballot display may consist of a matrix of rows or columns assigned to political parties or non-partisan candidates and columns or rows assigned to offices and contests. The display may consist of a contiguous matrix of the entire ballot or it may be segmented to present portions of the ballot in succession.	DRE	Pass	
01 - Pass	CA1-P3	118	TRUE	TRUE	TRUE	All tabulation devices shall display the unit serial number(s) both physically and within any applicable software, logs or reports.	DRE	Pass	
04 - Fail	CA1-P3	121	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to prepare the system for an election.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for authorized users to prepare the system for an election or for the system to provide user accounts with differing classes authorization?
01 - Pass	CA2-P3	201	TRUE	TRUE	TRUE	The voting system shall have a high level of integration between the ballot layout subsystem and the vote tabulation subsystem. This integration shall permit and facilitate the automatic transfer of all ballot setup information from the automated ballot layout module to the single ballot tabulation system that will be used in a fully integrated manner for DRE, optical scan, and any other voting devices included in the voting system.	PCOS	Pass	
04 - Fail	CA2-P3	204	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to preserve the system for future election use.	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for authorized users to prepare the system for an election or for the system to provide user accounts with differing classes authorization?
04 - Fail	CA2-P3	205	TRUE	TRUE	TRUE	The ballot definition subsystem shall be capable of handling at least 500 potentially active voting positions, arranged to identify party affiliations in a primary election, offices and their associated labels and instructions, candidate names and their associated labels and instructions, and issues or measures and their associated text and instructions.	PCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CA2-P3	210	TRUE	TRUE	TRUE	All tests shall be conducted as described in this section 45.6.2.3 in regular election mode. At no point shall testing be conducted in any form of test mode.	PCOS	Pass	
01 - Pass	CA2-P3	211	TRUE	TRUE	TRUE	All tabulation devices shall display the unit serial number(s) both physically and within any applicable software, logs or reports.	PCOS	Pass	
04 - Fail	CA2-P3	213	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to prepare the system for an election.	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for authorized users to prepare the system for an election or for the system to provide user accounts with differing classes authorization?
04 - Fail	CA2-P3	215	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Preventing access to vote data, including individual votes and vote totals, to unauthorized individuals.	PCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
04 - Fail	CA2-P3	222	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Preventing access to voter identification data and data for votes cast by the voter such that an individual can determine the content of specific votes cast by the voter.	PCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CA4-P3	401	TRUE	TRUE	TRUE	Demonstrate the ability for a user to generate and maintain a maximum of 10 different counting methods – the minimum is three and they are Absentee, Polling Place (or vote center) and Provisional – most counties shall have early voting as well as this.	Software	Pass	Category 7 - The requirement is not found in the Statute or Rule cited.
04 - Fail	CA4-P3	402	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Reporting vote totals;	Software	Indeterminable	Category 3 - Insufficient reference to supporting documents. The work paper refers to the log documents. The work paper fails to provide any information on what page and line on the log is relevant, the log stamp for the event, or a description of the difference in the content of the log entry and the content that was expected by the examiners.
01 - Pass	CA4-P3	403	TRUE	TRUE	TRUE	The ballot definition subsystem shall provide for the definition of political and administrative subdivisions where the list of candidates or contests may vary within the remote site and for the activation or exclusion of any portion of the ballot upon which the entitlement of a voter to vote may vary by reason of place of residence or other such administrative or geographical criteria. This database shall be used by the system with the administrative database to format ballots or edit formatted ballots within the jurisdiction.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CA4-P3	404	TRUE	TRUE	TRUE	The voting system shall allow the operator to generate and maintain an administrative database containing the definitions and descriptions of political subdivisions and offices within the jurisdiction.	Software	Pass	
04 - Fail	CA4-P3	405	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Casting and recording votes;	Software	Indeterminable	Category 3 - Insufficient reference to supporting documents. - The work paper refers to the log documents. The work paper fails to provide any information on what page and line on the log is relevant, the log stamp for the event, or a description of the difference in the content of the log entry and the content that was expected by the examiners.
04 - Fail	CA4-P3	406	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Calculating vote totals consistent with defined ballot formats;	Software	Indeterminable	Category 3 - Insufficient reference to supporting documents.- The work paper refers to the log documents. The work paper fails to provide any information on what page and line on the log is relevant, the log stamp for the event, or a description of the difference in the content of the log entry and the content that was expected by the examiners.
01 - Pass	CA4-P3	407	TRUE	TRUE	TRUE	The voting system application shall provide authorized users with the capability to produce electronic files including election results in either an ASCII (both comma-delimited and fixed-width) format or web based format that shall contain (a) all data or (b) any user selected data elements from the database. The software shall provide authorized users with the ability to generate these files on an "on-demand" basis. After creating such files, the authorized users shall, at their discretion, have the capability to copy the files to diskette, tape, or CD-ROM or to transmit the files to another information system.□ (a)Exports necessary for the Secretary of State shall conform to an agreed upon format.□ (b)Export files shall be generated so that election results can be communicated to the Secretary of State on election night both during the accumulation of results and after all results have been accumulated.	Software	Pass	
04 - Fail	CA4-P3	408	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Changing, or preventing the recording of, a vote;	Software	Indeterminable	Category 3 - Insufficient reference to supporting documents. - The work paper refers to the log documents. The work paper fails to provide any information on what page and line on the log is relevant, the log stamp for the event, or a description of the difference in the content of the log entry and the content that was expected by the examiners.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CA4-P3	409	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Changing calculated vote totals;	Software	Indeterminable	Category 3 - Insufficient reference to supporting documents. - The work paper refers to the log documents. The work paper fails to provide any information on what page and line on the log is relevant, the log stamp for the event, or a description of the difference in the content of the log entry and the content that was expected by the examiners.
04 - Fail	CA4-P3	410	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Preventing access to vote data, including individual votes and vote totals, to unauthorized individuals.	Software	Indeterminable	Category 3 - Insufficient reference to supporting documents.- The work paper refers to the log documents. The work paper fails to provide any information on what page and line on the log is relevant, the log stamp for the event, or a description of the difference in the content of the log entry and the content that was expected by the examiners.
04 - Fail	CA4-P3	411	TRUE	TRUE	TRUE	For each election, the subsystem shall allow the operator to generate and maintain a candidate and contest database and provide for the production and/or definition of properly formatted ballots and software.	Software	Indeterminable	Category 4 - Insufficient description to support the finding and status - Was there not a database or did the database not function as required?
04 - Fail	CA4-P3	412	TRUE	TRUE	TRUE	Demonstrate the ability for a user to generate and maintain a maximum of 500 remote voting locations each with the ability to contain one or multiple precincts, which does not affect the other counter groups and how many precincts they are able to maintain.	Software	Suspend	Categories 1 and 7 - Testing to verify compliance could not be completed. - The requirement is not found in the Statute or Rule cited.
04 - Fail	CA4-P3	413	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to lock and unlock system to prevent or allow changes to ballot design.	Software	Fail	
04 - Fail	CA4-P3	414	TRUE	TRUE	TRUE	Demonstrate the ability for a user to generate and maintain the definitions and descriptions of precincts and precinct splits (or sub-precincts) that are contained within a jurisdiction. The database shall allow for a maximum of 2000 precincts, and each precinct has the potential for 50 splits within the precinct.	Software	Suspend	Categories 1 and 7 - Testing to verify compliance could not be completed. - The requirement is not found in the Statute or Rule cited.
zz - Not Applicable	CA4-P3	415	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Preventing access to voter identification data and data for votes cast by the voter such that an individual can determine the content of specific votes cast by the voter.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CA4-P3	416	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Defining ballot formats;	Software	Indeterminable	Category 4 - Insufficient description to support the finding and status - What specific log entries were not found?
04 - Fail	CA4-P3	417	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Introducing data for a vote not cast by a registered voter;	Software	Indeterminable	Category 4 - Insufficient description to support the finding and status - What specific log entries were not found?
01 - Pass	CA4-P3	418	TRUE	TRUE	TRUE	All tests shall be conducted as described in this section 45.6.2.3 in regular election mode. At no point shall testing be conducted in any form of test mode	Software	Pass	
04 - Fail	CA4-P3	419	TRUE	TRUE	TRUE	The voting system application shall ensure that an election setup may not be changed once ballots are printed and/or election media devices are downloaded for votes to be conducted without proper authorization and acknowledgement by the application administrative account. The application and database audit transaction logs shall accurately reflect the name of the system operator making the change(s), the date and time of the change(s), and the "old" and "new" values of the change(s).	Software	Fail	
01 - Pass	CA4-P3	420	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election.□ The ballots shall be printed so as to give to each eligible elector a clear opportunity to designate his or her choice of candidates, joint candidates, ballot issues, and ballot questions by a mark as instructed. On the ballot may be printed words that will aid the elector, such as "vote for not more than one".□ □ At the end of the list of candidates for each different office shall be one or more blank spaces in which the elector may write the name of any eligible person not printed on the ballot who has filed an affidavit of intent of write-in candidate pursuant to section 1-4-1101. The number of spaces provided shall be the lesser of the number of eligible electors who have properly filed an affidavit of intent of write-in candidate pursuant to section 1-4-1101 or the number of persons to be elected to the office. No such blank spaces shall be provided if no eligible elector properly filed an affidavit of intent of write-in candidate.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CA4-P3	421	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Alteration of voting system audit records;	Software	Indeterminable	Category 4 - Insufficient description to support the finding and status - What specific log entries were not found?
01 - Pass	CA4-P3	422	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to preserve the system for future election use.	Software	Pass	
04 - Fail	CA4-P3	423	TRUE	TRUE	TRUE	The ballot definition subsystem shall be capable of handling at least 500 potentially active voting positions, arranged to identify party affiliations in a primary election, offices and their associated labels and instructions, candidate names and their associated labels and instructions, and issues or measures and their associated text and instructions.	Software	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CA4-P3	424	TRUE	TRUE	TRUE	The ballot display may consist of a matrix of rows or columns assigned to political parties or non-partisan candidates and columns or rows assigned to offices and contests. The display may consist of a contiguous matrix of the entire ballot or it may be segmented to present portions of the ballot in succession.	Software	Pass	
01 - Pass	CA4-P3	425	TRUE	TRUE	TRUE	The voting system application shall provide a facility for the definition of the ballot, including the definition of the number of allowable choices for each office and contest, and for special voting options such as write-in candidates. It shall provide for all voting options and specifications as provided for in Articles 5 and 7, Title 1, C.R.S. The system shall generate all required masters and distributed copies of the voting program in conformance with the definition of the ballot for each voting device and remote site. The distributed copies, resident or installed in each voting device, shall include all software modules required to: monitor system status and generate machine-level audit reports, accommodate device control functions performed by remote location officials and maintenance personnel, and register and accumulate votes.	Software	Pass	
zz - Not Applicable	CA4-P3	426	TRUE	TRUE	TRUE	All tabulation devices shall display the unit serial number(s) both physically and within any applicable software, logs or reports.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CA4-P3	427	TRUE	TRUE	TRUE	The voting system shall contain a control subsystem that consists of the physical devices and software that accomplish and validate the following operations: □ Voting system Preparation - The control subsystem shall encompass the hardware and software required to prepare remote location voting devices and memory devices for election use. Remote site preparation includes all operations necessary to install ballot displays, software, and memory devices in each voting device. The control subsystem shall be designed in such a manner as to facilitate the automated validation of ballot and software installation and to detect errors arising from their incorrect selection or improper installation.	Software	Pass	
01 - Pass	CA4-P3	428	TRUE	TRUE	TRUE	The voting system shall have a high level of integration between the ballot layout subsystem and the vote tabulation subsystem. This integration shall permit and facilitate the automatic transfer of all ballot setup information from the automated ballot layout module to the single ballot tabulation system that will be used in a fully integrated manner for DRE, optical scan, and any other voting devices included in the voting system.	Software	Pass	
04 - Fail	CA4-P3	429	TRUE	TRUE	TRUE	Demonstrate how a user can generate and maintain the definitions and descriptions of political subdivisions and offices within the jurisdiction. The system shall be capable of programming for a maximum of 100 jurisdiction types, each containing a potential of 100 districts within each one.	Software	Suspend	Categories 1 and 7 - Testing to verify compliance could not be completed. & The requirement is not found in the Statute or Rule cited.
01 - Pass	CA4-P3	430	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to prepare the system for an election.	Software	Pass	
zz - Not Applicable	CB3-P3	302	TRUE	TRUE	TRUE	The voting system shall contain a control subsystem that consists of the physical devices and software that accomplish and validate the following operations: □ Voting system Preparation - The control subsystem shall encompass the hardware and software required to prepare remote location voting devices and memory devices for election use. Remote site preparation includes all operations necessary to install ballot displays, software, and memory devices in each voting device. The control subsystem shall be designed in such a manner as to facilitate the automated validation of ballot and software installation and to detect errors arising from their incorrect selection or improper installation.	CCOS	Not Applicable	
04 - Fail	CB3-P3	303	TRUE	TRUE	TRUE	All tabulation devices shall display the unit serial number(s) both physically and within any applicable software, logs or reports.	CCOS	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	CB3-P3	304	TRUE	TRUE	TRUE	The voting system application shall provide a facility for the definition of the ballot, including the definition of the number of allowable choices for each office and contest, and for special voting options such as write-in candidates. It shall provide for all voting options and specifications as provided for in Articles 5 and 7, Title 1, C.R.S. The system shall generate all required masters and distributed copies of the voting program in conformance with the definition of the ballot for each voting device and remote site. The distributed copies, resident or installed in each voting device, shall include all software modules required to: monitor system status and generate machine-level audit reports, accommodate device control functions performed by remote location officials and maintenance personnel, and register and accumulate votes.	CCOS	Not Applicable	
01 - Pass	CB3-P3	305	TRUE	TRUE	TRUE	The ballot display may consist of a matrix of rows or columns assigned to political parties or non-partisan candidates and columns or rows assigned to offices and contests. The display may consist of a contiguous matrix of the entire ballot or it may be segmented to present portions of the ballot in succession.	CCOS	Pass	
04 - Fail	CB3-P3	306	TRUE	TRUE	TRUE	The ballot definition subsystem shall be capable of handling at least 500 potentially active voting positions, arranged to identify party affiliations in a primary election, offices and their associated labels and instructions, candidate names and their associated labels and instructions, and issues or measures and their associated text and instructions.	CCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
zz - Not Applicable	CB3-P3	307	TRUE	TRUE	TRUE	The voting system shall have a high level of integration between the ballot layout subsystem and the vote tabulation subsystem. This integration shall permit and facilitate the automatic transfer of all ballot setup information from the automated ballot layout module to the single ballot tabulation system that will be used in a fully integrated manner for DRE, optical scan, and any other voting devices included in the voting system.	CCOS	Not Applicable	
zz - Not Applicable	CB3-P3	309	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. the system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Preventing access to voter identification data and data for votes cast by the voter such that an individual can determine the content of specific votes cast by the voter.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CB3-P3	310	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to prepare the system for an election.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for authorized users to prepare the system for an election or for the system to provide user accounts with differing classes authorization?
01 - Pass	CB3-P3	312	TRUE	TRUE	TRUE	All tests shall be conducted as described in this section 45.6.2.3 in regular election mode. At no point shall testing be conducted in any form of test mode.	CCOS	Pass	
04 - Fail	CB3-P3	315	TRUE	TRUE	TRUE	The voting system provider shall provide documentation detailing voting system security in the areas listed below. The system shall contain documented configurations, properties and procedures to prevent, detect and log changes to system capabilities for: Preventing access to vote data, including individual votes and vote totals, to unauthorized individuals.	CCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
04 - Fail	CB3-P3	316	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to preserve the system for future election use.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for authorized users to prepare the system for an election or for the system to provide user accounts with differing classes authorization?
01 - Pass	CC1-P3	101	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <ul style="list-style-type: none"> (c) if the voter selects votes for more than one candidate for a single office: <ul style="list-style-type: none"> <input type="checkbox"/> (i) notify the voter that the voter has selected more than 1 candidate for a single office on the ballot; <input type="checkbox"/> (ii) notify the voter before the ballot is cast and counted of the effect of casting multiple votes for the office; and; <input type="checkbox"/> (iii) provide the voter with the opportunity to correct the ballot before the ballot is cast and counted. 	DRE	Pass	
01 - Pass	CC1-P3	102	TRUE	TRUE	TRUE	Single cross mark for party slate not permitted. Each office in every election shall be voted upon separately, and no emblem, device, or political party designation shall be used on the official ballot at any election by which an eligible elector may vote for more than one office by placing a single cross mark on the ballot or by writing in the name of any political party or political organization.	DRE	Pass	
01 - Pass	CC1-P3	103	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election. The designated election official shall not print, in connection with any name, any title or degree designating the business or profession of the candidate.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC1-P3	104	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election. <ul style="list-style-type: none"> The names of the candidates for each office shall be arranged under the designation of the office as provided in section 1-5-404. The designated election official shall not print, in connection with any name, any title or degree designating the business or profession of the candidate. Whenever candidates are to be voted for only by the eligible electors of a particular district, county, or other political subdivision, the names of those candidates shall not be printed on any ballots other than those provided for use in the district, county, or political subdivision in which those candidates are to be voted on. No printing or distinguishing marks shall be on the ballot except as specifically provided in this code. 	DRE	Pass	
04 - Fail	CC1-P3	105	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. <ul style="list-style-type: none"> (d) The paper record shall be accessible for individuals with disabilities including non-visual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters. 	DRE	Fail	
02 - Pass Conditional	CC1-P3	106	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. <ul style="list-style-type: none"> (c) The paper record produced under subparagraph (a) shall be available as an official record for any recount conducted with respect to any election in which the system is used. 	DRE	Conditional Pass	
01 - Pass	CC1-P3	107	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <ul style="list-style-type: none"> <input type="checkbox"/> It provides for voting in secrecy. 	DRE	Pass	
01 - Pass	CC1-P3	108	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <ul style="list-style-type: none"> (d) Ensure that any notification required under this paragraph preserves the privacy of the vote and the confidentiality of the ballot. 	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC1-P3	109	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election. If a referred measure, including but not limited to a measure referred by the school board of a multicounty school district or the board of directors of a multicounty special district to the registered electors of the school district or special district, is referred to registered electors of multiple counties, the alphabetical, numerical, or alphanumerical designation used to identify the measure shall be identical on each ballot that includes the measure.	DRE	Pass	
01 - Pass	CC1-P3	110	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <ul style="list-style-type: none"> (a) permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted; (b) provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted (including the opportunity to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error). 	DRE	Pass	
01 - Pass	CC1-P3	111	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <ul style="list-style-type: none"> (a) permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted; 	DRE	Pass	
01 - Pass	CC1-P3	112	TRUE	TRUE	TRUE	If there is no candidate on the ballot for any particular office, the ballot shall read, "No candidate for this office."	DRE	Pass	
01 - Pass	CC1-P3	113	TRUE	TRUE	TRUE	The text of all ballot issues that are subject to Article X, Section 20 shall be printed in all capital letters. The names of all candidates and all other ballot issues and questions shall be printed in upper and lower case.	DRE	Pass	
01 - Pass	CC1-P3	114	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. <ul style="list-style-type: none"> (b) The voting system shall provide the voter with an opportunity to change the ballot or correct any error before the permanent paper record is produced. 	DRE	Pass	
01 - Pass	CC1-P3	115	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <ul style="list-style-type: none"> in a primary election, permits each elector to vote only for a candidate seeking nomination by the political party with which the elector is affiliated. 	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC1-P3	116	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <ul style="list-style-type: none"> in a presidential election, permits each elector to vote by a single operation for all presidential electors of a pair of candidates for president and vice president. 	DRE	Pass	
01 - Pass	CC1-P3	117	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <ul style="list-style-type: none"> Does not use a device for the piercing of ballots by the elector. 	DRE	Pass	
01 - Pass	CC1-P3	118	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <ul style="list-style-type: none"> Provides a method for write-in voting. 	DRE	Suspend	Category 5 - Observations do not support the Status - Incorrectly recording input for write-ins does not seem to satisfy the requirement for providing a method for write ins.
zz - Not Applicable	CC1-P3	119	TRUE	TRUE	TRUE	Ballot design shall cover the scope of allowable designs for the given system. For example, if a system is capable of producing 11" and 19" ballots, then both ballot styles shall be tested in each of the elections above. If more sizes are available, they shall also be tested. Ballots must be designed and presented with a maximum of four (4) columns and a minimum of one (1) column.	DRE	Not Applicable	
01 - Pass	CC1-P3	120	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: In a general election, allow a voter to vote for any candidate for any office, in the number of positions allowed for the office, and to select any measure on the ballot that the candidate is allowed to vote in, regardless of party.	DRE	Pass	
01 - Pass	CC1-P3	121	TRUE	TRUE	TRUE	The voting system shall provide capabilities to enforce confidentiality of voters' ballot choices. <ul style="list-style-type: none"> All optical scan devices, associated ballot boxes and V-PAT storage devices shall provide physical locks and procedures to prevent disclosure of voters' confidential ballot choices during and after the vote casting operation. 	DRE	Pass	
01 - Pass	CC1-P3	122	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Allow for programming to accommodate Colorado recall questions as prescribed in Article 12 of Title 1, C.R.S.;	DRE	Pass	
01 - Pass	CC1-P3	123	TRUE	TRUE	TRUE	Ballots shall include candidates to represent the maximum number of political parties in the State of Colorado, and shall accommodate all qualified political parties and political organizations.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC1-P3	124	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Ability to contain a ballot question or issue of at least 200 words.	DRE	Pass	
04 - Fail	CC1-P3	125	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: A minimum of 20 pairs of "yes" and "no" positions for voting on ballot issues.	DRE	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CC2-P3	201	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It contains a protective counter with a register which cannot be reset, which shall register the cumulative total number of movements of the operating mechanism.	PCOS	Pass	
01 - Pass	CC2-P3	202	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It rejects any vote for an office or on a ballot issue if the number of votes exceeds the number the elector is entitled to cast.	PCOS	Pass	
01 - Pass	CC2-P3	203	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Provides a method for write-in voting.	PCOS	Pass	
01 - Pass	CC2-P3	204	TRUE	TRUE	TRUE	A duplicate stub is not required for a ballot that is prepared for a mail ballot election pursuant to article 7.5 of this title.	PCOS	Pass	
01 - Pass	CC2-P3	205	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: It is suitably designed, of durable construction, and capable of being used safely, efficiently, and accurately in the conduct of elections and the tabulation of votes.	PCOS	Pass	
01 - Pass	CC2-P3	206	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It prevents the elector from voting for the same candidates more than once for the same office;	PCOS	Pass	
01 - Pass	CC2-P3	207	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It permits each elector, other than at a primary election, to vote for the candidates of one or more parties and for unaffiliated candidates.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CC2-P3	208	TRUE	TRUE	TRUE	No ballot stub is required for a ballot produced on demand, so long as the quantity of ballots produced for the election can be reconciled by the ballot processing method used by the voting system. Such ballots may contain printed and distinguishing marks, so long as secrecy in voting is protected.	PCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - Is the ability to produce ballots on demand a requirement? Or does the standard require accountability if Ballots are produced without stubs.
01 - Pass	CC2-P3	209	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector to verify his or her votes privately and independently before the ballot is cast.	PCOS	Pass	
01 - Pass	CC2-P3	210	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <input type="checkbox"/> (b) provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted (including the opportunity to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error).	PCOS	Pass	
zz - Not Applicable	CC2-P3	211	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. <input type="checkbox"/> (d) The paper record shall be accessible for individuals with disabilities including non-visual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.	PCOS	Not Applicable	
01 - Pass	CC2-P3	212	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <input type="checkbox"/> (a) permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted;	PCOS	Pass	
01 - Pass	CC2-P3	213	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector privately and independently to change the ballot or correct any error before the ballot is cast, including by voting a replacement ballot if the elector is otherwise unable to change the ballot or correct an error.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC2-P3	214	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. □ (c) The paper record produced under subparagraph (a) shall be available as an official record for any recount conducted with respect to any election in which the system is used.	PCOS	Pass	
01 - Pass	CC2-P3	215	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. □ (b) The voting system shall provide the voter with an opportunity to change the ballot or correct any error before the permanent paper record is produced.	PCOS	Pass	
04 - Fail	CC2-P3	216	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: □ (d) Ensure that any notification required under this paragraph preserves the privacy of the vote and the confidentiality of the ballot.	PCOS	Fail	
01 - Pass	CC2-P3	217	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: □ (c) If the voter selects votes for more than one candidate for a single office: □ □ (i) notify the voter that the voter has selected more than 1 candidate for a single office on the ballot; □ □ (ii) notify the voter before the ballot is cast and counted of the effect of casting multiple votes for the office; and □ □ (iii) provide the voter with the opportunity to correct the ballot before the ballot is cast and counted.	PCOS	Pass	
01 - Pass	CC2-P3	218	TRUE	TRUE	TRUE	The voting system shall provide capabilities to enforce confidentiality of voters' ballot choices. □ All optical scan devices, associated ballot boxes and V-VPAT storage devices shall provide physical locks and procedures to prevent disclosure of voters' confidential ballot choices during and after the vote casting operation.	PCOS	Pass	
01 - Pass	CC2-P3	219	TRUE	TRUE	TRUE	Precinct Optical Scan Procedures for voters whose ballots are rejected or sorted by the precinct counter as a blank or overvoted ballot shall be given the opportunity to correct their ballot.	PCOS	Pass	

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Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC2-P3	220	TRUE	TRUE	TRUE	Precinct Optical Scan Procedures for Ballots sorted to a write-in bin shall be tallied at the conclusion of the voting and delivered to the central counting center in a secure container.	PCOS	Pass	
01 - Pass	CC2-P3	221	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: □ If the elector overvotes it notifies the elector before the ballot is cast that the elector has overvoted.	PCOS	Pass	
01 - Pass	CC2-P3	222	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: □ In a presidential election, permits each elector to vote by a single operation for all presidential electors of a pair of candidates for president and vice president.	PCOS	Pass	
22 - Not Applicable	CC2-P3	223	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: □ If the system uses a voting device: □ It permits the names of candidates and the text of issues to be printed on pages which are securely attached to the voting device, the pages to be securely locked in a metal frame or sealed to prevent tampering.	PCOS	Not Applicable	
01 - Pass	CC2-P3	224	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Ability to contain a ballot question or issue of at least 200 words.	PCOS	Pass	
04 - Fail	CC2-P3	225	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: A minimum of 20 pairs of "yes" and "no" positions for voting on ballot issues.	PCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CC2-P3	226	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: In a general election, allow a voter to vote for any candidate for any office, in the number of positions allowed for the office, and to select any measure on the ballot that the candidate is allowed to vote in, regardless of party.	PCOS	Pass	
01 - Pass	CC2-P3	227	TRUE	TRUE	TRUE	Ballots shall include candidates to represent the maximum number of political parties in the State of Colorado, and shall accommodate all qualified political parties and political organizations.	PCOS	Pass	

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Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CC2-P3	228	TRUE	TRUE	TRUE	Ballot design shall cover the scope of allowable designs for the given system. For example, if a system is capable of producing 11" and 18" ballots, then both ballot styles shall be tested in each of the elections above. If more sizes are available, they shall also be tested. Ballots must be designed and presented with a maximum of four (4) columns and a minimum of one (1) column.	PCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CC2-P3	229	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it notifies the elector before the vote is cast that an overvote for any office, ballot question, or ballot issue will not be counted.	PCOS	Pass	
01 - Pass	CC2-P3	230	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate votes from ballots of different political parties at the same polling place in a primary election.	PCOS	Pass	
01 - Pass	CC2-P3	231	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Counts votes correctly.	PCOS	Pass	
01 - Pass	CC2-P3	232	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Does not use a device for the piercing of ballots by the elector.	PCOS	Pass	
04 - Fail	CC2-P3	233	TRUE	TRUE	TRUE	Except as provided in subsections (1.5) and (1.6) of this section, the extreme top part of each ballot may be divided into two spaces by two perforated or dotted lines. Each space shall be not less than one inch wide. The top portion is called the stub, and the next portion is called the duplicate stub. The same number shall be printed upon both the stub and the duplicate stub. All ballots shall be numbered consecutively. All ballots shall be uniform and of sufficient length and width to allow for the names of candidates, officers, ballot issues, and ballot questions to be printed in clear, plain type, with a space of at least one-half inch between the different columns on the ballot. On each ballot shall be printed the endorsement "Official ballot for", and after the word "for" shall follow the designation of the precinct, if appropriate, and the political subdivision for which the ballot is prepared, the date of the election, and a facsimile of the signature of the election official. The election official shall use precisely the same quality and tim	PCOS	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC2-P3	234	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> In a primary election, permits each elector to vote only for a candidate seeking nomination by the political party with which the elector is affiliated.	PCOS	Pass	
01 - Pass	CC2-P3	235	TRUE	TRUE	TRUE	The text of all ballot issues that are subject to Article X, Section 20 shall be printed in all capital letters. The names of all candidates and all other ballot issues and questions shall be printed in upper and lower case.	PCOS	Pass	
01 - Pass	CC2-P3	236	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector to vote for all offices for which the elector is lawfully entitled to vote and no others, to vote for as many candidates for an office as the elector is entitled to vote for, and to vote for or against any ballot question or ballot issue on which the elector is entitled to vote.	PCOS	Pass	
01 - Pass	CC2-P3	237	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Allow for programming to accommodate Colorado recall questions as prescribed in Article 12 of Title 1, C.R.S.;	PCOS	Pass	
04 - Fail	CC2-P3	238	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It provides for voting in secrecy.	PCOS	Fail	
01 - Pass	CC2-P3	239	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> For electronic and electromechanical voting systems using ballot cards, accepts an overvoted or undervoted ballot if the elector chooses to cast the ballot, but it does not record a vote for any office, ballot question, or ballot issue that has been overvoted.	PCOS	Pass	
01 - Pass	CC2-P3	240	TRUE	TRUE	TRUE	If there is no candidate on the ballot for any particular office, the ballot shall read, "No candidate for this office."	PCOS	Pass	
01 - Pass	CC2-P3	242	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Does not record a vote for any office, ballot question, or ballot issue that is overvoted on a ballot cast by an elector.	PCOS	Pass	
01 - Pass	CC2-P3	244	TRUE	TRUE	TRUE	Single cross mark for party slate not permitted. Each office in every election shall be voted upon separately, and no emblem, device, or political party designation shall be used on the official ballot at any election by which an eligible elector may vote for more than one office by placing a single cross mark on the ballot or by writing in the name of any political party or political organization.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC2-P3	245	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it gives the elector the opportunity to correct the ballot before the ballot is cast.	PCOS	Pass	
04 - Fail	CC2-P3	246	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It is capable of providing printouts of vote totals by office and candidate or by ballot issue, including a numeric-only printout to be used for testing as provided in section 1-7-509.	PCOS	Fail	
01 - Pass	CC2-P3	248	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: It permits each elector to write in the names of eligible candidates not appearing on the printed ballot, to vote for as many candidates for an office as there are vacancies for which the elector is entitled to vote, and to vote for or against any ballot issue upon which the elector is entitled to vote.	PCOS	Pass	
01 - Pass	CC2-P3	249	TRUE	TRUE	TRUE	The voting system shall contain a control subsystem that consists of the physical devices and software that accomplish and validate the following operations: <input type="checkbox"/> Error Detection -- the voting system shall contain a detailed list and description of the error messages that will appear on the voting devices, the controller (if any), the paper ballot printer, programmer, or any other device used in the voting process to indicate that a component has failed or is malfunctioning.	PCOS	Pass	
01 - Pass	CC3-P3	301	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> For electronic and electromechanical voting systems using ballot cards, accepts an overvoted or undervoted ballot if the elector chooses to cast the ballot, but it does not record a vote for any office, ballot question, or ballot issue that has been overvoted.	CCOS	Pass	
01 - Pass	CC3-P3	302	TRUE	TRUE	TRUE	The text of all ballot issues that are subject to Article X, Section 20 shall be printed in all capital letters. The names of all candidates and all other ballot issues and questions shall be printed in upper and lower case.	CCOS	Pass	
01 - Pass	CC3-P3	303	TRUE	TRUE	TRUE	If there is no candidate on the ballot for any particular office, the ballot shall read, "No candidate for this office."	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC3-P3	307	TRUE	TRUE	TRUE	Single cross mark for party slate not permitted. Each office in every election shall be voted upon separately, and no emblem, device, or political party designation shall be used on the official ballot at any election by which an eligible elector may vote for more than one office by placing a single cross mark on the ballot or by writing in the name of any political party or political organization.	CCOS	Pass	
01 - Pass	CC3-P3	308	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Allow for programming to accommodate Colorado recall questions as prescribed in Article 12 of Title 1, C.R.S.;	CCOS	Pass	
01 - Pass	CC3-P3	309	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Does not record a vote for any office, ballot question, or ballot issue that is overvoted on a ballot cast by an elector.	CCOS	Pass	
zz - Not Applicable	CC3-P3	310	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It permits the names of candidates and the text of issues to be printed on pages which are securely attached to the voting device, the pages to be securely locked in a metal frame or sealed to prevent tampering.	CCOS	Not Applicable	
01 - Pass	CC3-P3	311	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> In a presidential election, permits each elector to vote by a single operation for all presidential electors of a pair of candidates for president and vice president.	CCOS	Pass	
01 - Pass	CC3-P3	312	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Provides a method for write-in voting.	CCOS	Pass	
01 - Pass	CC3-P3	313	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Counts votes correctly.	CCOS	Pass	
01 - Pass	CC3-P3	314	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate the total number of votes for each candidate for each office and the total number of votes for and against each ballot question and ballot issue for the polling place.	CCOS	Pass	
01 - Pass	CC3-P3	315	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate votes from ballots of different political parties at the same polling place in a primary election.	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC3-P3	316	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it notifies the elector before the ballot is cast that the elector has overvoted.	CCOS	Not Applicable	Category 5 - Observations do not support the Status - Requirement for Voter Notification not applicable to Central Count Scanners
zz - Not Applicable	CC3-P3	317	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it notifies the elector before the vote is cast that an overvote for any office, ballot question, or ballot issue will not be counted.	CCOS	Not Applicable	
zz - Not Applicable	CC3-P3	318	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it gives the elector the opportunity to correct the ballot before the ballot is cast.	CCOS	Not Applicable	
zz - Not Applicable	CC3-P3	319	TRUE	TRUE	TRUE	The voting system shall provide capabilities to enforce confidentiality of voters' ballot choices. <input type="checkbox"/> All optical scan devices, associated ballot boxes and V-VPAT storage devices shall provide physical locks and procedures to prevent disclosure of voters' confidential ballot choices during and after the vote casting operation.	CCOS	Not Applicable	
01 - Pass	CC3-P3	320	TRUE	TRUE	TRUE	A duplicate stub is not required for a ballot that is prepared for a mail ballot election pursuant to article 7.5 of this title.	CCOS	Pass	
zz - Not Applicable	CC3-P3	321	TRUE	TRUE	TRUE	No ballot stub is required for a ballot produced on demand, so long as the quantity of ballots produced for the election can be reconciled by the ballot processing method used by the voting system. Such ballots may contain printed and distinguishing marks, so long as secrecy in voting is protected.	CCOS	Not Applicable	
01 - Pass	CC3-P3	322	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <input type="checkbox"/> (b) provide the voter with the opportunity (in a private and independent manner) to change the ballot or correct any error before the ballot is cast and counted (including the opportunity to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error).	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	CC3-P3	323	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. <input type="checkbox"/> (d) The paper record shall be accessible for individuals with disabilities including non-visual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.	CCOS	Not Applicable	
zz - Not Applicable	CC3-P3	324	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <input type="checkbox"/> (a) permit the voter to verify (in a private and independent manner) the votes selected by the voter on the ballot before the ballot is cast and counted;	CCOS	Not Applicable	
01 - Pass	CC3-P3	325	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. <input type="checkbox"/> (c) The paper record produced under subparagraph (a) shall be available as an official record for any recount conducted with respect to any election in which the system is used.	CCOS	Pass	
zz - Not Applicable	CC3-P3	326	TRUE	TRUE	TRUE	The voting systems described in the foregoing paragraphs shall produce a record with an audit capacity for such system. <input type="checkbox"/> (b) The voting system shall provide the voter with an opportunity to change the ballot or correct any error before the permanent paper record is produced.	CCOS	Not Applicable	
zz - Not Applicable	CC3-P3	327	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It provides for voting in secrecy.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	CC3-P3	328	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <input type="checkbox"/> (c) if the voter selects votes for more than one candidate for a single office; <input type="checkbox"/> (i) notify the voter that the voter has selected more than 1 candidate for a single office on the ballot; <input type="checkbox"/> (ii) notify the voter before the ballot is cast and counted of the effect of casting multiple votes for the office; and <input type="checkbox"/> (iii) provide the voter with the opportunity to correct the ballot before the ballot is cast and counted.	CCOS	Not Applicable	
01 - Pass	CC3-P3	329	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector to vote for all offices for which the elector is lawfully entitled to vote and no others, to vote for as many candidates for an office as the elector is entitled to vote for, and to vote for or against any ballot question or ballot issue on which the elector is entitled to vote.	CCOS	Pass	
zz - Not Applicable	CC3-P3	330	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector to verify his or her votes privately and independently before the ballot is cast.	CCOS	Not Applicable	
04 - Fail	CC3-P3	331	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It contains a protective counter with a register which cannot be reset, which shall register the cumulative total number of movements of the operating mechanism.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is a central tabulator a "voting device"
01 - Pass	CC3-P3	332	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: It is suitably designed, of durable construction, and capable of being used safely, efficiently, and accurately in the conduct of elections and the tabulation of votes.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is a central tabulator a "voting device"
01 - Pass	CC3-P3	333	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It prevents the elector from voting for the same candidates more than once for the same office;	CCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - The requirement is to prevent voter from casting more than one ballot not the prevention of overvotes

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC3-P3	334	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It permits each elector, other than at a primary election, to vote for the candidates of one or more parties and for unaffiliated candidates.	CCOS	Pass	
01 - Pass	CC3-P3	335	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It rejects any vote for an office or on a ballot issue if the number of votes exceeds the number the elector is entitled to cast.	CCOS	Pass	
01 - Pass	CC3-P3	336	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Does not use a device for the piercing of ballots by the elector.	CCOS	Pass	
zz - Not Applicable	CC3-P3	337	TRUE	TRUE	TRUE	Voting systems (including optical scanning voting systems or direct recording electronic systems) certified by the secretary of state and acquired, purchased or leased by counties pursuant to state law shall: <input type="checkbox"/> (d) Ensure that any notification required under this paragraph preserves the privacy of the vote and the confidentiality of the ballot.	CCOS	Not Applicable	
01 - Pass	CC3-P3	338	TRUE	TRUE	TRUE	Ballots shall include candidates to represent the maximum number of political parties in the State of Colorado, and shall accommodate all qualified political parties and political organizations.	CCOS	Pass	
01 - Pass	CC3-P3	339	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: In a general election, allow a voter to vote for any candidate for any office, in the number of positions allowed for the office, and to select any measure on the ballot that the candidate is allowed to vote in, regardless of party.	CCOS	Pass	
04 - Fail	CC3-P3	340	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: A minimum of 20 pairs of "yes" and "no" positions for voting on ballot issues.	CCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CC3-P3	341	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Ability to contain a ballot question or issue of at least 200 words.	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	CC3-P3	342	TRUE	TRUE	TRUE	Except as provided in subsections (1.5) and (1.6) of this section, the extreme top part of each ballot may be divided into two spaces by two perforated or dotted lines. Each space shall be not less than one inch wide. The top portion is called the stub, and the next portion is called the duplicate stub. The same number shall be printed upon both the stub and the duplicate stub. All ballots shall be numbered consecutively. All ballots shall be uniform and of sufficient length and width to allow for the names of candidates, officers, ballot issues, and ballot questions to be printed in clear, plain type, with a space of at least one-half inch between the different columns on the ballot. On each ballot shall be printed the endorsement "Official ballot for", and after the word "for" shall follow the designation of the precinct, if appropriate, and the political subdivision for which the ballot is prepared, the date of the election, and a facsimile of the signature of the election official. The election official shall use precisely the same quality and tint	CCOS	Not Applicable	
04 - Fail	CC3-P3	343	TRUE	TRUE	TRUE	Ballot design shall cover the scope of allowable designs for the given system. For example, if a system is capable of producing 11" and 18" ballots, then both ballot styles shall be tested in each of the elections above. If more sizes are available, they shall also be tested. Ballots must be designed and presented with a maximum of four (4) columns and a minimum of one (1) column.	CCOS	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CC3-P3	344	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> in a primary election, permits each elector to vote only for a candidate seeking nomination by the political party with which the elector is affiliated.	CCOS	Pass	
01 - Pass	CC3-P3	345	TRUE	TRUE	TRUE	Sequence of Resolution Procedures for Central Count Optical Scan Procedures are (2) Official ballots shall be processed through the optical scanner, with sorted overvotes, blank ballots, and write-in ballots viewed and resolved by the resolution board. Only ballots sorted by the machine shall be subject to review by the resolution board. If there are no legally qualified write-in candidates, the write-in sort option shall not be utilized. The number of each duplicated ballot shall be entered on the resolution board log sheet.	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC3-P3	346	TRUE	TRUE	TRUE	The voting system shall contain a control subsystem that consists of the physical devices and software that accomplish and validate the following operations: <input type="checkbox"/> Error Detection – the voting system shall contain a detailed list and description of the error messages that will appear on the voting devices, the controller (if any), the paper ballot printer, programmer, or any other device used in the voting process to indicate that a component has failed or is malfunctioning.	CCOS	Pass	
04 - Fail	CC3-P3	347	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It is capable of providing printouts of vote totals by office and candidate or by ballot issue, including a numeric-only printout to be used for testing as provided in section 1-7-509.	CCOS	Fail	
01 - Pass	CC3-P3	348	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements It permits each elector to write in the names of eligible candidates not appearing on the printed ballot, to vote for as many candidates for an office as there are vacancies for which the elector is entitled to vote, and to vote for or against any ballot issue upon which the elector is entitled to vote.	CCOS	Pass	
zz - Not Applicable	CC3-P3	360	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector privately and independently to change the ballot or correct any error before the ballot is cast, including by voting a replacement ballot if the elector is otherwise unable to change the ballot or correct an error.	CCOS	Not Applicable	
01 - Pass	CC4-P3	401	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> For electronic and electromechanical voting systems using ballot cards, accepts an overvoted or undervoted ballot if the elector chooses to cast the ballot, but it does not record a vote for any office, ballot question, or ballot issue that has been overvoted.	Software	Pass	
01 - Pass	CC4-P3	402	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> In a primary election, permits each elector to vote only for a candidate seeking nomination by the political party with which the elector is affiliated.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CC4-P3	403	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> In a presidential election, permits each elector to vote by a single operation for all presidential electors of a pair of candidates for president and vice president.	Software	Pass	
zz - Not Applicable	CC4-P3	404	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Does not use a device for the piercing of ballots by the elector.	Software	Not Applicable	
01 - Pass	CC4-P3	405	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Provides a method for write-in voting.	Software	Pass	
01 - Pass	CC4-P3	406	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Counts votes correctly.	Software	Pass	
01 - Pass	CC4-P3	407	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate the total number of votes for each candidate for each office and the total number of votes for and against each ballot question and ballot issue for the polling place.	Software	Pass	
01 - Pass	CC4-P3	408	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate votes from ballots of different political parties at the same polling place in a primary election.	Software	Pass	
04 - Fail	CC4-P3	409	TRUE	TRUE	TRUE	Ballot design shall cover the scope of allowable designs for the given system. For example, if a system is capable of producing 11" and 18" ballots, then both ballot styles shall be tested in each of the elections above. If more sizes are available, they shall also be tested. Ballots must be designed and presented with a maximum of four (4) columns and a minimum of one (1) column.	Software	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CC4-P3	411	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Allow for programming to accommodate Colorado recall questions as prescribed in Article 12 of Title 1, C.R.S.;	Software	Pass	
01 - Pass	CC4-P3	412	TRUE	TRUE	TRUE	Ballots shall include candidates to represent the maximum number of political parties in the State of Colorado, and shall accommodate all qualified political parties and political organizations.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CC4-P3	413	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: A minimum of 20 pairs of "yes" and "no" positions for voting on ballot issues.	Software	Suspend	Category 1 - Testing to verify compliance could not be completed.
01 - Pass	CC4-P3	414	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: In a general election, allow a voter to vote for any candidate for any office, in the number of positions allowed for the office, and to select any measure on the ballot that the candidate is allowed to vote in, regardless of party.	Software	Pass	
zz - Not Applicable	CC4-P3	415	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: It is suitably designed, of durable construction, and capable of being used safely, efficiently, and accurately in the conduct of elections and the tabulation of votes.	Software	Not Applicable	
01 - Pass	CC4-P3	416	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Does not record a vote for any office, ballot question, or ballot issue that is overvoted on a ballot cast by an elector.	Software	Pass	
01 - Pass	CC4-P3	418	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector to vote for all offices for which the elector is lawfully entitled to vote and no others, to vote for as many candidates for an office as the elector is entitled to vote for, and to vote for or against any ballot question or ballot issue on which the elector is entitled to vote.	Software	Pass	
01 - Pass	CC4-P3	419	TRUE	TRUE	TRUE	A duplicate stub is not required for a ballot that is prepared for a mail ballot election pursuant to article 7.5 of this title.	Software	Pass	
zz - Not Applicable	CC4-P3	420	TRUE	TRUE	TRUE	No ballot stub is required for a ballot produced on demand, so long as the quantity of ballots produced for the election can be reconciled by the ballot processing method used by the voting system. Such ballots may contain printed and distinguishing marks, so long as secrecy in voting is protected.	Software	Not Applicable	
01 - Pass	CC4-P3	421	TRUE	TRUE	TRUE	Ballots shall include the following minimum race situations to simulate and test "real world" situations in the State of Colorado: Ability to contain a ballot question or issue of at least 200 words.	Software	Pass	

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zz - Not Applicable	CC4-P3	422	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It contains a protective counter with a register which cannot be reset, which shall register the cumulative total number of movements of the operating mechanism.	Software	Not Applicable	
zz - Not Applicable	CC4-P3	423	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It prevents the elector from voting for the same candidates more than once for the same office;	Software	Not Applicable	
01 - Pass	CC4-P3	424	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It rejects any vote for an office or on a ballot issue if the number of votes exceeds the number the elector is entitled to cast.	Software	Pass	
01 - Pass	CC4-P3	425	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It permits each elector, other than at a primary election, to vote for the candidates of one or more parties and for unaffiliated candidates.	Software	Pass	
01 - Pass	CC4-P3	426	TRUE	TRUE	TRUE	The ballot definition subsystem of the voting system consists of hardware and software required to accomplish the functions outlined in this section 45.5.2.3. System databases contained in the Ballot Definition Subsystem may be constructed individually or they may be integrated into one database. These databases are treated as separate databases to identify the necessary types of data that shall be handled and to specify, where appropriate, those attributes that can be measured or assessed for determining compliance with the requirements of this standard.	Software	Pass	
zz - Not Applicable	CC4-P3	428	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It provides for voting in secrecy.	Software	Not Applicable	
01 - Pass	CC4-P3	429	TRUE	TRUE	TRUE	The text of all ballot issues that are subject to Article X, Section 20 shall be printed in all capital letters. The names of all candidates and all other ballot issues and questions shall be printed in upper and lower case.	Software	Pass	
01 - Pass	CC4-P3	430	TRUE	TRUE	TRUE	If there is no candidate on the ballot for any particular office, the ballot shall read, "No candidate for this office."	Software	Pass	

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01 - Pass	CC4-P3	431	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election. <input type="checkbox"/> The names of the candidates for each office shall be arranged under the designation of the office as provided in section 1-5-404. The designated election official shall not print, in connection with any name, any title or degree designating the business or profession of the candidate. <input type="checkbox"/> Whenever candidates are to be voted for only by the eligible electors of a particular district, county, or other political subdivision, the names of those candidates shall not be printed on any ballots other than those provided for use in the district, county, or political subdivision in which those candidates are to be voted on. <input type="checkbox"/> No printing or distinguishing marks shall be on the ballot except as specifically provided in this code.	Software	Pass	
01 - Pass	CC4-P3	432	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election. If a referred measure, including but not limited to a measure referred by the school board of a multicounty school district or the board of directors of a multicounty special district to the registered electors of the school district or special district, is referred to registered electors of multiple counties, the alphabetical, numerical, or alphanumeric designation used to identify the measure shall be identical on each ballot that includes the measure.	Software	Pass	
01 - Pass	CC4-P3	433	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to setup and prepare ballots for an election. The designated election official shall not print, in connection with any name, any title or degree designating the business or profession of the candidate.	Software	Pass	
01 - Pass	CC4-P3	434	TRUE	TRUE	TRUE	Single cross mark for party slate not permitted. Each office in every election shall be voted upon separately, and no emblem, device, or political party designation shall be used on the official ballot at any election by which an eligible elector may vote for more than one office by placing a single cross mark on the ballot or by writing in the name of any political party or political organization.	Software	Pass	

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zz - Not Applicable	CC4-P3	435	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It permits the names of candidates and the text of issues to be printed on pages which are securely attached to the voting device, the pages to be securely locked in a metal frame or sealed to prevent tampering.	Software	Not Applicable	
zz - Not Applicable	CC4-P3	436	TRUE	TRUE	TRUE	The voting system shall contain a control subsystem that consists of the physical devices and software that accomplish and validate the following operations: <input type="checkbox"/> Error Detection – the voting system shall contain a detailed list and description of the error messages that will appear on the voting devices, the controller (if any), the paper ballot printer, programmer, or any other device used in the voting process to indicate that a component has failed or is malfunctioning.	Software	Not Applicable	
01 - Pass	CC4-P3	437	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements It permits each elector to write in the names of eligible candidates not appearing on the printed ballot, to vote for as many candidates for an office as there are vacancies for which the elector is entitled to vote, and to vote for or against any ballot issue upon which the elector is entitled to vote.	Software	Pass	
04 - Fail	CC4-P3	438	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It is capable of providing printouts of vote totals by office and candidate or by ballot issue, including a numeric-only printout to be used for testing as provided in section 1-7-509.	Software	Fail	
04 - Fail	CD1-P3	101	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. for DRE devices, this capability shall include at a minimum for a period of not less than 3 hours the ability to: store voters' choices accurately in all storage locations on the device.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - The requirement is for no loss of data.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CD1-P3	102	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. for DRE devices, this capability shall include at a minimum for a period of not less than 3 hours the ability to: continue to present ballot accurately to voters;	DRE	Fail	
01 - Pass	CD1-P3	103	TRUE	TRUE	TRUE	The voting system shall meet the following minimum requirements for casting ballots. Speed requirements are based on a printed double sided complete 18" ballot with a minimum of 20 contests: DRE / Touch Screen = 20 ballots per hour.	DRE	Pass	
04 - Fail	CD1-P3	104	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. for DRE devices, this capability shall include at a minimum for a period of not less than 3 hours the ability to: tabulate voters' choices accurately;	DRE	Fail	
04 - Fail	CD1-P3	106	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. for DRE devices, this capability shall include at a minimum for a period of not less than 3 hours the ability to: transmit required results files accurately if power failure experienced during transmittal of results.	DRE	Fail	
04 - Fail	CD1-P3	107	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For V-VPAT devices connected to DREs, this capability shall include at a minimum for a period of not less than 3 hours the ability to: continue to print voters' choices on the DRE accurately and in a manner that is identical to the manner of the printers' operations during a period of normal electrical operations.	DRE	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CD1-P3	108	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For V-VPAT devices connected to DREs, this capability shall include at a minimum for a period of not less than 3 hours the ability to: continue to store the printed ballots in a secure manner that is identical to the manner of the printers' operations during a period of normal electrical operations.	DRE	Fail	
04 - Fail	CD1-P3	109	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For DRE devices, this capability shall include at a minimum for a period of not less than 3 hours the ability to: accept voters' choices accurately on the devices;	DRE	Fail	
01 - Pass	CD2-P3	201	TRUE	TRUE	TRUE	The voting system shall meet the following minimum requirements for casting ballots. Speed requirements are based on a printed double sided complete 18" ballot with a minimum of 20 contests: <input type="checkbox"/> Optical Scan Ballots at voting location(s) = 100 ballots per hour.	PCOS	Pass	
04 - Fail	CD2-P3	202	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: transmit required results files accurately if power failure experienced during transmittal of results.	PCOS	Fail	
04 - Fail	CD2-P3	203	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: Store accurately a voters' ballot choices during a period of electrical outage.	PCOS	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CD2-P3	204	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: tabulate accurately voters' choices from the ballots.	PCOS	Fail	
01 - Pass	CD2-P3	205	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: Continue to scan or image voters' ballots;	PCOS	Pass	
01 - Pass	CD3-P3	301	TRUE	TRUE	TRUE	The voting system shall meet the following minimum requirements for casting ballots. Speed requirements are based on a printed double sided complete 18" ballot with a minimum of 20 contests: Central Count Optical Scan Ballots = 100 ballots per hour.	CCOS	Pass	
04 - Fail	CD3-P3	302	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: transmit required results files accurately if power failure experienced during transmittal of results.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is a central tabulator a "voting device"
04 - Fail	CD3-P3	303	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: Store accurately a voters' ballot choices during a period of electrical outage.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is a central tabulator a "voting device"
04 - Fail	CD3-P3	304	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: tabulate accurately voters' choices from the ballots.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is a central tabulator a "voting device"

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CD3-P3	305	TRUE	TRUE	TRUE	All electrical voting devices provided by the voting system provider shall have the capability to continue operations and provide continuous device availability during a period of electrical outage without any loss of election data. For optical scan devices, this capability shall include at a minimum for a period of not less than three hours the ability to: Continue to scan or image voters' ballots;	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - is a central tabulator a "voting device"
01 - Pass	CD4-P3	401	TRUE	TRUE	TRUE	The voting system provider's software application shall be able to recover operations after a power outage or other abnormal shutdown of the system on which that application and database are operating without loss of more than the current transaction data record on which the administrative account or authorized operator account is currently working.	Software	Indeterminable	Category 5 - Observations do not support the Status - The requirement is for recovery after abnormal shutdown. Loss of AC power on a laptop would not simulate this unless the battery was removed from the laptop.
01 - Pass	CD4-P3	402	TRUE	TRUE	TRUE	At no time shall third party hardware or software negatively impact performance levels of voting system application, unless a voting system provider specifically details through documentation the specific hardware or software, the performance impact, and a workaround for the end user to overcome the issue.	Software	Pass	
04 - Fail	CD4-P3	403	TRUE	TRUE	TRUE	For the purposes of evaluating software, the voting system provider shall be required to provide detailed information as to the type of hardware required to execute the software. The performance level shall be such that an evaluator of the software would have pauses equal to less than 5 seconds in the system during the ballot design and creation, along with the downloading and uploading of election media devices. The application software upon creation of the layout of races on ballots shall view the ballot image (on screen) for the evaluator in less than 30 seconds per ballot image.	Software	Fail	
01 - Pass	CD4-P3	404	TRUE	TRUE	TRUE	For the purposes of evaluating software, the voting system provider shall be required to provide detailed information as to the type of hardware required to execute the software. The performance level shall be such that an evaluator of the software would have pauses equal to less than 5 seconds in the system during the ballot design and creation, along with the downloading and uploading of election media devices. Specifically, the following minimum standards are required: Election Media Upload is less than 20 seconds per media.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CD4-P3	405	TRUE	TRUE	TRUE	For the purposes of evaluating software, the voting system provider shall be required to provide detailed information as to the type of hardware required to execute the software. The performance level shall be such that an evaluator of the software would have pauses equal to less than 5 seconds in the system during the ballot design and creation, along with the downloading and uploading of election media devices. Specifically, the following minimum standards are required: Election Media Download is less than 35 seconds per media.	Software	Fail	
01 - Pass	CD4-P3	406	TRUE	TRUE	TRUE	For the purposes of evaluating software, the voting system provider shall be required to provide detailed information as to the type of hardware required to execute the software. The performance level shall be such that an evaluator of the software would have pauses equal to less than 5 seconds in the system during the ballot design and creation, along with the downloading and uploading of election media devices. Specifically, the following minimum standards are required: Ballot style assignment is less than 10 seconds per ballot style.	Software	Pass	
zz - Not Applicable	CE1-P3	101	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it notifies the elector before the vote is cast that an overvote for any office, ballot question, or ballot issue will not be counted.	DRE	Not Applicable	
zz - Not Applicable	CE1-P3	102	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It rejects any vote for an office or on a ballot issue if the number of votes exceeds the number the elector is entitled to cast.	DRE	Not Applicable	
01 - Pass	CE1-P3	103	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It permits each elector, other than at a primary election, to vote for the candidates of one or more parties and for unaffiliated candidates.	DRE	Pass	
01 - Pass	CE1-P3	104	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> It prevents the elector from voting for the same candidates more than once for the same office;	DRE	Indeterminable	Category 5 - Observations do not support the Status - The requirement is to prevent the voter from voting more than once - Observation is prevention of overvoting.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CE1-P3	105	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: It is suitably designed, of durable construction, and capable of being used safely, efficiently, and accurately in the conduct of elections and the tabulation of votes.	DRE	Pass	
zz - Not Applicable	CE1-P3	106	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It permits the names of candidates and the text of issues to be printed on pages which are securely attached to the voting device, the pages to be securely locked in a metal frame or sealed to prevent tampering.	DRE	Not Applicable	
01 - Pass	CE1-P3	107	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It contains a protective counter with a register which cannot be reset, which shall register the cumulative total number of movements of the operating mechanism.	DRE	Pass	
04 - Fail	CE1-P3	108	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements: <input type="checkbox"/> If the system uses a voting device: <input type="checkbox"/> It is capable of providing printouts of vote totals by office and candidate or by ballot issue, including a numeric-only printout to be used for testing as provided in section 1-7-509.	DRE	Fail	
01 - Pass	CE1-P3	109	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector to vote for all offices for which the elector is lawfully entitled to vote and no others, to vote for as many candidates for an office as the elector is entitled to vote for, and to vote for or against any ballot question or ballot issue on which the elector is entitled to vote.	DRE	Pass	
02 - Pass Conditional	CE1-P3	110	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector to verify his or her votes privately and independently before the ballot is cast.	DRE	Conditional Pass	
01 - Pass	CE1-P3	111	TRUE	TRUE	TRUE	No nonpunch card electronic voting system shall be purchased, leased, or used unless it fulfills the following requirements It permits each elector to write in the names of eligible candidates not appearing on the printed ballot, to vote for as many candidates for an office as there are vacancies for which the elector is entitled to vote, and to vote for or against any ballot issue upon which the elector is entitled to vote.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	CE1-P3	112	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it notifies the elector before the ballot is cast that the elector has overvoted.	DRE	Not Applicable	
01 - Pass	CE1-P3	113	TRUE	TRUE	TRUE	The voting system shall provide capabilities to enforce confidentiality of voters' ballot choices. <input type="checkbox"/> All DRE devices shall provide randomization of all voter choices and stored, electronic ballot information, regardless of format, to prevent disclosure of voters' confidential ballot choices during and after storage of the voters' ballot selections.	DRE	Pass	
zz - Not Applicable	CE1-P3	114	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> If the elector overvotes it gives the elector the opportunity to correct the ballot before the ballot is cast.	DRE	Not Applicable	
zz - Not Applicable	CE1-P3	115	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Does not record a vote for any office, ballot question, or ballot issue that is overvoted on a ballot cast by an elector.	DRE	Not Applicable	
zz - Not Applicable	CE1-P3	116	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> For electronic and electromechanical voting systems using ballot cards, accepts an overvoted or undervoted ballot if the elector chooses to cast the ballot, but it does not record a vote for any office, ballot question, or ballot issue that has been overvoted.	DRE	Not Applicable	
01 - Pass	CE1-P3	117	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Counts votes correctly.	DRE	Pass	
01 - Pass	CE1-P3	118	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate the total number of votes for each candidate for each office and the total number of votes for and against each ballot question and ballot issue for the polling place.	DRE	Pass	
01 - Pass	CE1-P3	119	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate votes from ballots of different political parties at the same polling place in a primary election.	DRE	Pass	
01 - Pass	CE1-P3	120	TRUE	TRUE	TRUE	The voting system shall provide a means for a voter to change the voter's selection prior to the voter casting the ballot.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CE1-P3	121	TRUE	TRUE	TRUE	Voters voting on DRE devices shall be able to navigate through the screens without the use of page scrolling. Features such as next or previous page options shall be used.	DRE	Pass	
04 - Fail	CE1-P3	122	TRUE	TRUE	TRUE	All DRE voting devices shall use touch screen technology or other technology providing visual ballot display and selection. The voting system provider shall include documentation concerning the use of touch screen or other display and selection technology, including but not limited to: <ul style="list-style-type: none"> Technical documentation describing the nature and sensitivity of any other technology used to display and select offices, candidates, or issues; 	DRE	Fail	
01 - Pass; 04 - Fail	CE1-P3	123	TRUE	TRUE	TRUE	The voting system shall contain a control subsystem that consists of the physical devices and software that accomplish and validate the following operations: <ul style="list-style-type: none"> Error Detection – the voting system shall contain a detailed list and description of the error messages that will appear on the voting devices, the controller (if any), the paper ballot printer, programmer, or any other device used in the voting process to indicate that a component has failed or is malfunctioning. 	DRE	(Pass - Fail)	
02 - Pass Conditional	CE1-P3	124	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Permits each elector privately and independently to change the ballot or correct any error before the ballot is cast, including by voting a replacement ballot if the elector is otherwise unable to change the ballot or correct an error.	DRE	Conditional Pass	
01 - Pass	CF1-P3	101	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Hardware events – add hardware, remove hardware, initialize hardware and change hardware properties. 	DRE	Pass	
01 - Pass	CF1-P3	102	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Election events – setup, set for election, unset for election, open polls, close polls, end election, upload devices, download devices, create ballots, create precincts, create districts, create poll places (or Vote Centers), initialize devices, backup devices, and voting activity; 	DRE	Pass	
01 - Pass	CF1-P3	103	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: Printing activity (where applicable).	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CF1-P3	104	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Application start and stop. 	DRE	Pass	
04 - Fail	CF1-P3	105	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Log on and log off activity. 	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - Does the device have a log on and log off function? If not would the audit record of the function be required?
01 - Pass	CF1-P3	106	TRUE	TRUE	TRUE	The voting system shall be capable of producing electronic and printed audit logs of system operation and system operators actions which shall be sufficient to allow all operations and input commands to be audited.	DRE	Pass	
01 - Pass	CF1-P3	107	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Saves and produces the records necessary to audit the operation of the electronic or electromechanical voting system, including a permanent paper record with a manual audit capacity.	DRE	Pass	
01 - Pass	CF2-P3	201	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: Printing activity (where applicable).	PCOS	Pass	
01 - Pass	CF2-P3	202	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Hardware events – add hardware, remove hardware, initialize hardware and change hardware properties. 	PCOS	Pass	
01 - Pass	CF2-P3	203	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Election events – setup, set for election, unset for election, open polls, close polls, end election, upload devices, download devices, create ballots, create precincts, create districts, create poll places (or Vote Centers), initialize devices, backup devices, and voting activity; 	PCOS	Pass	
01 - Pass	CF2-P3	204	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Application start and stop. 	PCOS	Pass	
04 - Fail	CF2-P3	205	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <ul style="list-style-type: none"> Log on and log off activity. 	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Does the device have a log on and log off function? If not would the audit record of the function be required?
01 - Pass	CF2-P3	206	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Saves and produces the records necessary to audit the operation of the electronic or electromechanical voting system, including a permanent paper record with a manual audit capacity.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CF2-P3	207	TRUE	TRUE	TRUE	The voting system shall be capable of producing electronic and printed audit logs of system operation and system operators actions which shall be sufficient to allow all operations and input commands to be audited.	PCOS	Fail	
01 - Pass	CF3-P3	301	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Saves and produces the records necessary to audit the operation of the electronic or electromechanical voting system, including a permanent paper record with a manual audit capacity.	CCOS	Pass	
01 - Pass	CF3-P3	302	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Election events – setup, set for election, unset for election, open polls, close polls, end election, upload devices, download devices, create ballots, create precincts, create districts, create poll places (or Vote Centers), initialize devices, backup devices, and voting activity;	CCOS	Pass	
01 - Pass	CF3-P3	303	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: Printing activity (where applicable).	CCOS	Pass	
04 - Fail	CF3-P3	304	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Application start and stop.	CCOS	Fail	
04 - Fail	CF3-P3	305	TRUE	TRUE	TRUE	The voting system shall be capable of producing electronic and printed audit logs of system operation and system operators actions which shall be sufficient to allow all operations and input commands to be audited.	CCOS	Fail	
01 - Pass	CF3-P3	306	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Hardware events – add hardware, remove hardware, initialize hardware and change hardware properties.	CCOS	Pass	
04 - Fail	CF3-P3	307	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Log on and log off activity.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Does the device have a log on and log off function? If not would the audit record of the function be required?
01 - Pass	CF4-P3	401	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: Saves and produces the records necessary to audit the operation of the electronic or electromechanical voting system, including a permanent paper record with a manual audit capacity.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CF4-P3	402	TRUE	TRUE	TRUE	All transaction audit records of the database shall be maintained in a file outside or separate from the database which is not accessible by standard user/operator accounts.	Software	Fail	
04 - Fail	CF4-P3	403	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Hardware events – add hardware, remove hardware, initialize hardware and change hardware properties.	Software	Indeterminable	Category 5 - Observations do not support the Status - Did testing include generating the events which would have been recorded?
04 - Fail	CF4-P3	404	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Election events – setup, set for election, unset for election, open polls, close polls, end election, upload devices, download devices, create ballots, create precincts, create districts, create poll places (or Vote Centers), initialize devices, backup devices, and voting activity;	Software	Fail	
04 - Fail	CF4-P3	405	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: Printing activity (where applicable).	Software	Fail	
04 - Fail	CF4-P3	406	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Application start and stop.	Software	Fail	
04 - Fail	CF4-P3	407	TRUE	TRUE	TRUE	The voting system shall track and maintain audit information of the following voting system application events: <input type="checkbox"/> Log on and log off activity.	Software	Fail	
04 - Fail	CF4-P3	408	TRUE	TRUE	TRUE	The voting system shall be capable of producing electronic and printed audit logs of system operation and system operators actions which shall be sufficient to allow all operations and input commands to be audited.	Software	Fail	
01 - Pass	CG1-P3	101	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The statement of votes counted by race and ballot question or issue;	DRE	Pass	
01 - Pass	CG1-P3	102	TRUE	TRUE	TRUE	The voting system shall provide for the tabulation of votes cast in combined precincts at remote sites, where more than one precinct is voting at the same location, on either the same ballot style or a different ballot style.	DRE	Pass	
01 - Pass	CG1-P3	103	TRUE	TRUE	TRUE	The voting system shall provide for the tabulation of votes cast in split precincts where all voters residing in one precinct are not voting the same ballot style.	DRE	Pass	
01 - Pass	CG1-P3	104	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can automatically produce vote totals for the polling place in printed form.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	CG1-P3	105	TRUE	TRUE	TRUE	If the total number of votes cast and counted in any precinct by early voters' and absentee ballot is less than ten, the returns for all such precincts in the political subdivision shall be reported together.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - If early voted ballots or absentees were scanned in precincts they would be combined.
zz - Not Applicable	CG1-P3	106	TRUE	TRUE	TRUE	The voting system shall accurately integrate election day voting results with absentee, early voting as well as provisional ballot results.	DRE	Not Applicable	
04 - Fail	CG1-P3	107	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total active registered electors in the precinct and the total for the jurisdiction holding the election;	DRE	Not Applicable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct device function?
04 - Fail	CG1-P3	108	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total number of electors voting in each precinct, and the total for the jurisdiction holding the election;	DRE	Not Applicable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct device function?
01 - Pass	CG1-P3	109	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of voters who voted early;	DRE	Not Applicable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct device function?
zz - Not Applicable	CG1-P3	110	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of emergency registrations;	DRE	Not Applicable	
zz - Not Applicable	CG1-P3	111	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of absentee or mail ballots counted and the number rejected;	DRE	Not Applicable	
zz - Not Applicable	CG1-P3	112	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of provisional ballots counted and the number rejected listed by each rejection code pursuant to Rule 26.5.4 .	DRE	Not Applicable	
zz - Not Applicable	CG1-P3	113	TRUE	TRUE	TRUE	Beginning with the 2008 general election, and for all elections thereafter, the returns certified by the judges and the abstract of votes cast certified by the canvass board shall indicate the number of votes cast by early voters' or absentee ballot in each precinct for each candidate and for and against each ballot issue and ballot question and the number of ballots rejected, except as otherwise provided in paragraph (b) of this subsection (3).	DRE	Not Applicable	
zz - Not Applicable	CG2-P3	201	TRUE	TRUE	TRUE	Beginning with the 2008 general election, and for all elections thereafter, the returns certified by the judges and the abstract of votes cast certified by the canvass board shall indicate the number of votes cast by early voters' or absentee ballot in each precinct for each candidate and for and against each ballot issue and ballot question and the number of ballots rejected, except as otherwise provided in paragraph (b) of this subsection (3).	PCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	CG2-P3	202	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of absentee or mail ballots counted and the number rejected;	PCOS	Not Applicable	
01 - Pass	CG2-P3	203	TRUE	TRUE	TRUE	The voting system shall provide for the tabulation of votes cast in combined precincts at remote sites, where more than one precinct is voting at the same location, on either the same ballot style or a different ballot style.	PCOS	Pass	
04 - Fail	CG2-P3	204	TRUE	TRUE	TRUE	If the total number of votes cast and counted in any precinct by early voters' and absentee ballot is less than ten, the returns for all such precincts in the political subdivision shall be reported together.	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - If early voted ballots or absentees were scanned in precincts they would be combined.
04 - Fail	CG2-P3	205	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total active registered electors in the precinct and the total for the jurisdiction holding the election;	PCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct device function?
01 - Pass	CG2-P3	206	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The statement of votes counted by race and ballot question or issue;	PCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct device function?
zz - Not Applicable	CG2-P3	207	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of emergency registrations;	PCOS	Not Applicable	
04 - Fail	CG2-P3	208	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can automatically produce vote totals for the polling place in printed form.	PCOS	Indeterminable	Categories 2 and 4 - Questionable interpretation of the requirement & Insufficient description to support the finding and status
01 - Pass	CG2-P3	209	TRUE	TRUE	TRUE	The voting system shall provide for the tabulation of votes cast in split precincts where all voters residing in one precinct are not voting the same ballot style.	PCOS	Pass	
04 - Fail	CG2-P3	210	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total number of electors voting in each precinct, and the total for the jurisdiction holding the election;	PCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct device function?
zz - Not Applicable	CG2-P3	211	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of provisional ballots counted and the number rejected listed by each rejection code pursuant to Rule 26.5.4 .	PCOS	Not Applicable	
01 - Pass	CG2-P3	212	TRUE	TRUE	TRUE	The voting system shall accurately integrate election day voting results with absentee, early voting as well as provisional ballot results.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CG2-P3	213	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can tabulate the total number of votes for each candidate for each office and the total number of votes for and against each ballot question and ballot issue for the polling place.	PCOS	Pass	
01 - Pass	CG2-P3	214	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of voters who voted early;	PCOS	Not Applicable	Categories 2 and 5 - Questionable interpretation of the requirement & Observation does not support status - Would not printing an official abstract be a WINEDS Function, not a precinct device function? Printing the name of the voting location is not equal to printing the number of voters who voted early.
04 - Fail	CG3-P3	301	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of voters who voted early;	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a 400-C function?
04 - Fail	CG3-P3	302	TRUE	TRUE	TRUE	If the total number of votes cast and counted in any precinct by early voters' and absentee ballot is less than ten, the returns for all such precincts in the political subdivision shall be reported together.	CCOS	Fail	
04 - Fail	CG3-P3	303	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total active registered electors in the precinct and the total for the jurisdiction holding the election;	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a 400-C function?
01 - Pass	CG3-P3	304	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The statement of votes counted by race and ballot question or issue;	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a 400-C function?
zz - Not Applicable	CG3-P3	305	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of emergency registrations;	CCOS	Not Applicable	
04 - Fail	CG3-P3	306	TRUE	TRUE	TRUE	Beginning with the 2008 general election, and for all elections thereafter, the returns certified by the judges and the abstract of votes cast certified by the canvass board shall indicate the number of votes cast by early voters' or absentee ballot in each precinct for each candidate and for and against each ballot issue and ballot question and the number of ballots rejected, except as otherwise provided in paragraph (b) of this subsection (3).	CCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - Rejecting provisionals and absentees is outside the tabulation system
zz - Not Applicable	CG3-P3	307	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can automatically produce vote totals for the polling place in printed form.	CCOS	Not Applicable	
01 - Pass	CG3-P3	308	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total number of electors voting in each precinct, and the total for the jurisdiction holding the election;	CCOS	Not Applicable	Category 2 - Questionable interpretation of the requirement - Would not printing an official abstract be a WINEDS Function, not a precinct device function?

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	CG3-P3	309	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of provisional ballots counted and the number rejected listed by each rejection code pursuant to Rule 26.5.4 .	CCOS	Not Applicable	
zz - Not Applicable	CG3-P3	310	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of absentee or mail ballots counted and the number rejected;	CCOS	Not Applicable	
01 - Pass	CG3-P3	311	TRUE	TRUE	TRUE	The voting system shall accurately integrate election day voting results with absentee, early voting as well as provisional ballot results.	CCOS	Pass	
01 - Pass	CG3-P3	312	TRUE	TRUE	TRUE	The voting system shall provide for the tabulation of votes cast in split precincts where all voters residing in one precinct are not voting the same ballot style.	CCOS	Pass	
01 - Pass	CG4-P3	401	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total active registered electors in the precinct and the total for the jurisdiction holding the election;	Software	Pass	
01 - Pass	CG4-P3	402	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of absentee or mail ballots counted and the number rejected;	Software	Pass	
04 - Fail	CG4-P3	403	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of provisional ballots counted and the number rejected listed by each rejection code pursuant to Rule 26.5.4 .	Software	Fail	
01 - Pass	CG4-P3	404	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of voters who voted early;	Software	Pass	
01 - Pass	CG4-P3	405	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The total number of electors voting in each precinct, and the total for the jurisdiction holding the election;	Software	Pass	
01 - Pass	CG4-P3	406	TRUE	TRUE	TRUE	The voting system shall provide for the tabulation of votes cast in split precincts where all voters residing in one precinct are not voting the same ballot style.	Software	Pass	
zz - Not Applicable	CG4-P3	407	TRUE	TRUE	TRUE	No electronic or electromechanical voting system shall be certified by the secretary of state unless such system: <input type="checkbox"/> Can automatically produce vote totals for the polling place in printed form.	Software	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	CG4-P3	408	TRUE	TRUE	TRUE	Beginning with the 2008 general election, and for all elections thereafter, the returns certified by the judges and the abstract of votes cast certified by the canvass board shall indicate the number of votes cast by early voters' or absentee ballot in each precinct for each candidate and for and against each ballot issue and ballot question and the number of ballots rejected, except as otherwise provided in paragraph (b) of this subsection (3).	Software	Pass	
01 - Pass	CG4-P3	409	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The statement of votes counted by race and ballot question or issue;	Software	Pass	
01 - Pass	CG4-P3	410	TRUE	TRUE	TRUE	If the total number of votes cast and counted in any precinct by early voters' and absentee ballot is less than ten, the returns for all such precincts in the political subdivision shall be reported together.	Software	Pass	
04 - Fail	CG4-P3	411	TRUE	TRUE	TRUE	The voting system shall accurately integrate election day voting results with absentee, early voting as well as provisional ballot results.	Software	Indeterminable	Category 5 - Observations do not support the Status - The requirement is to integrate. Observation is failed to differentiate.
zz - Not Applicable	CG4-P3	412	TRUE	TRUE	TRUE	Any report or export (electronic or paper based) generated from an Electronic Pollbook shall remove the date/time stamp from the record and not use this field as a sort method. Any assignment of Record IDs, Key ID, or Serial Number stored in the database of votes shall be randomly assigned.	Software	Not Applicable	
zz - Not Applicable	CG4-P3	413	TRUE	TRUE	TRUE	The official abstract shall include, by precinct/ballot style or vote center, where applicable The number of emergency registrations;	Software	Not Applicable	
01 - Pass	DA1-P3	101	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct logic and accuracy testing as required herein: <ul style="list-style-type: none"> □ All V-VPAT components shall be capable of integrating into existing state testing and auditing requirements of the voting system.□ □ Election Judges shall attest to the V-VPAT record having no votes included on the paper record prior to the start of voting, and prior to the installation or replacement of a new V-VPAT record. 	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DA1-P3	102	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct hardware and diagnostics testing as required herein: <ul style="list-style-type: none"> Hardware Diagnostic Test for All input and output devices;□ Hardware Diagnostic Test for Communications ports;□ Hardware Diagnostic Test for System printers;□ Hardware Diagnostic Test for System modems when applicable;□ Hardware Diagnostic Test for System Screen displays;□ Hardware Diagnostic Test for Boot performance and initializations;□ Hardware Diagnostic Test for Firmware loads;□ Hardware Diagnostic Test for Software loads;□ Hardware Diagnostic Test for Confirmation that screen displays are functioning □ Hardware Diagnostic Test for Date, time and calibration of systems. 	DRE	Fail	
01 - Pass	DA2-P3	201	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct hardware and diagnostics testing as required herein: <ul style="list-style-type: none"> Hardware Diagnostic Test for All input and output devices;□ Hardware Diagnostic Test for Communications ports;□ Hardware Diagnostic Test for System printers;□ Hardware Diagnostic Test for System modems when applicable;□ Hardware Diagnostic Test for System Screen displays;□ Hardware Diagnostic Test for Boot performance and initializations;□ Hardware Diagnostic Test for Firmware loads;□ Hardware Diagnostic Test for Software loads;□ Hardware Diagnostic Test for Confirmation that screen displays are functioning □ Hardware Diagnostic Test for Date, time and calibration of systems. 	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	DA2-P3	202	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct logic and accuracy testing as required herein: All V-VPAT components shall be capable of integrating into existing state testing and auditing requirements of the voting system. <input type="checkbox"/> Election Judges shall attest to the V-VPAT record having no votes included on the paper record prior to the start of voting, and prior to the installation or replacement of a new V-VPAT record.	CCOS	Not Applicable	
04 - Fail	DA3-P3	301	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct hardware and diagnostics testing as required herein: Hardware Diagnostic Test for All input and output devices: Hardware Diagnostic Test for Communications ports: Hardware Diagnostic Test for System printers: Hardware Diagnostic Test for System modems when applicable: Hardware Diagnostic Test for System Screen displays: Hardware Diagnostic Test for Boot performance and initializations: Hardware Diagnostic Test for Firmware loads: Hardware Diagnostic Test for Software loads: Hardware Diagnostic Test for Confirmation that screen displays are functioning Hardware Diagnostic Test for Date, time and calibration of systems.	CCOS	Fail	
zz - Not Applicable	DA3-P3	302	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct logic and accuracy testing as required herein: All V-VPAT components shall be capable of integrating into existing state testing and auditing requirements of the voting system. <input type="checkbox"/> Election Judges shall attest to the V-VPAT record having no votes included on the installation or replacement of a new V-VPAT record.	CCOS	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	DA4-P3	401	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct hardware and diagnostics testing as required herein: Hardware Diagnostic Test for All input and output devices: Hardware Diagnostic Test for Communications ports: Hardware Diagnostic Test for System printers: Hardware Diagnostic Test for System modems when applicable: Hardware Diagnostic Test for System Screen displays: Hardware Diagnostic Test for Boot performance and initializations: Hardware Diagnostic Test for Firmware loads: Hardware Diagnostic Test for Software loads: Hardware Diagnostic Test for Confirmation that screen displays are functioning Hardware Diagnostic Test for Date, time and calibration of systems.	Software	Not Applicable	
zz - Not Applicable	DA4-P3	402	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct logic and accuracy testing as required herein: All V-VPAT components shall be capable of integrating into existing state testing and auditing requirements of the voting system. <input type="checkbox"/> Election Judges shall attest to the V-VPAT record having no votes included on the paper record prior to the start of voting, and prior to the installation or replacement of a new V-VPAT record.	Software	Not Applicable	
01 - Pass	DB1-P3	101	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Polling Place / DRE 500.	DRE	Pass	
01 - Pass	DB1-P3	102	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Provisional – ballots are flat- no score marks.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB1-P3	103	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots shall be provided consisting of 25 ballots for each precinct/precinct split generated for each election that are flat (1500 minimum combined). At least one deck shall have the General Election data, and at least one shall have the Primary election data as indicated in the instructions for voting system providers;	DRE	Pass	
01 - Pass	DB1-P3	104	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Absentee – ballots are scored and folded to fit in standard Colorado Absentee Mailing Envelopes.	DRE	Pass	
01 - Pass	DB1-P3	105	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Early Voting – ballots are flat – no score marks.	DRE	Pass	
01 - Pass	DB1-P3	106	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots shall be provided consisting of 25 ballots for each precinct/precinct split generated for each election that are folded (1500 minimum combined). At least one deck shall have the General Election data, and at least one shall have the Primary election data as indicated in the instructions for voting system providers;	DRE	Pass	
01 - Pass	DB1-P3	107	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Poll Place or Vote Center - ballots are flat – no score marks.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB1-P3	108	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Early Voting / DRE 250.	DRE	Pass	
zz - Not Applicable	DB1-P3	109	TRUE	TRUE	TRUE	Votes cast for an office to be filled or a ballot question or ballot issue to be decided shall not be counted if a voter marks more names than there are persons to be elected to an office or if for any reason it is impossible to determine the elector's choice of candidate or vote concerning the ballot question or ballot issue. A defective or an incomplete mark on any ballot in a proper place shall be counted if no other mark is on the ballot indicating an intention to vote for some other candidate or ballot question or ballot issue.	DRE	Not Applicable	
01 - Pass	DB1-P3	110	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Vote Center / DRE 500.	DRE	Pass	
01 - Pass	DB1-P3	111	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: One separate deck of ballots consisting of 200 ballots of any single precinct from the Coordinated election shall be provided that contains a two page ballot (races on four faces).	DRE	Pass	
01 - Pass	DB1-P3	112	TRUE	TRUE	TRUE	Each voting system shall be tested and examined by conducting at least three mock elections which shall include voting scenarios that exist within a primary election, a coordinated election, and a recall election.	DRE	Pass	
01 - Pass	DB1-P3	113	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots consisting of 300 ballots of any single precinct from each election. Two of these decks shall be printed in all alternative languages as required for the State of Colorado pursuant to section 45.5.2.3.4;	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB1-P3	114	TRUE	TRUE	TRUE	The testing board shall mark a minimum of 300 ballots with marking devices of various color, weight, and consistency to determine accurate counting with a variety of marking devices.	DRE	Not Applicable	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
01 - Pass	DB1-P3	115	TRUE	TRUE	TRUE	The voting system provider shall provide 10 ballot marking pens/pencils/markers as defined by their system for marking ballots by the Secretary of State or the designee.	DRE	Pass	
zz - Not Applicable	DB1-P3	116	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Any vendor that uses serial numbers printed on ballots for processing shall produce ballots of each requirement printed both with and without serial numbers.	DRE	Not Applicable	
01 - Pass	DB1-P3	117	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: One separate deck of ballots consisting of 10 ballots for each precinct generated for the Recall election that are flat as indicated in the instructions for vendors.	DRE	Pass	
01 - Pass	DB2-P3	201	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Early Voting / OS 5000.	PCOS	Pass	
01 - Pass	DB2-P3	202	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Provisional 5,000.	PCOS	Pass	
01 - Pass	DB2-P3	203	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Polling Place / OS 1500.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB2-P3	204	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots shall be provided consisting of 25 ballots for each precinct/precinct split generated for each election that are folded (1500 minimum combined). At least one deck shall have the General Election data, and at least one shall have the Primary election data as indicated in the instructions for voting system providers;	PCOS	Pass	
01 - Pass	DB2-P3	205	TRUE	TRUE	TRUE	Test all ballot reading functions – are they accurate and reliable as described in the requirement - how do scanner(s) responds to smudges, folds, etc; response to valid and invalid or absence of marks.	PCOS	Pass	Category 7 - The requirement is not found in the Statute or Rule cited.
01 - Pass	DB2-P3	206	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Vote Center/ OS 5000.	PCOS	Pass	
01 - Pass	DB2-P3	207	TRUE	TRUE	TRUE	Votes cast for an office to be filled or a ballot question or ballot issue to be decided shall not be counted if a voter marks more names than there are persons to be elected to an office or if for any reason it is impossible to determine the elector's choice of candidate or vote concerning the ballot question or ballot issue. A defective or an incomplete mark on any ballot in a proper place shall be counted if no other mark is on the ballot indicating an intention to vote for some other candidate or ballot question or ballot issue.	PCOS	Pass	
01 - Pass	DB2-P3	208	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Provisional – ballots are flat- no score marks.	PCOS	Pass	
01 - Pass	DB2-P3	209	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Absentee – ballots are scored and folded to fit in standard Colorado Absentee Mailing Envelopes.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB2-P3	210	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Early Voting – ballots are flat – no score marks.	PCOS	Pass	
zz - Not Applicable	DB2-P3	211	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Any vendor that uses serial numbers printed on ballots for processing shall produce ballots of each requirement printed both with and without serial numbers.	PCOS	Not Applicable	
01 - Pass	DB2-P3	212	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Poll Place or Vote Center - ballots are flat – no score marks.	PCOS	Pass	
01 - Pass	DB2-P3	213	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: One separate deck of ballots consisting of 200 ballots of any single precinct from the Coordinated election shall be provided that contains a two page ballot (races on four faces).	PCOS	Pass	
01 - Pass	DB2-P3	214	TRUE	TRUE	TRUE	The testing board shall mark a minimum of 300 ballots with marking devices of various color, weight, and consistency to determine accurate counting with a variety of marking devices.	PCOS	Pass	
01 - Pass	DB2-P3	215	TRUE	TRUE	TRUE	The voting system provider shall provide 10 ballot marking pens/pencils/markers as defined by their system for marking ballots by the Secretary of State or the designee.	PCOS	Pass	
01 - Pass	DB2-P3	216	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: One separate deck of ballots consisting of 10 ballots for each precinct generated for the Recall election that are flat as indicated in the instructions for vendors.	PCOS	Pass	
01 - Pass	DB2-P3	217	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots consisting of 300 ballots of any single precinct from each election. Two of these decks shall be printed in all alternative languages as required for the State of Colorado pursuant to section 45.5.2.3.4;	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB2-P3	218	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots shall be provided consisting of 25 ballots for each precinct/precinct split generated for each election that are flat (1500 minimum combined). At least one deck shall have the General Election data, and at least one shall have the Primary election data as indicated in the instructions for voting system providers;	PCOS	Pass	
01 - Pass	DB2-P3	219	TRUE	TRUE	TRUE	The system shall stop and inform operator of ballot handling errors such as misfeeds, damaged ballot, and multiple feeds. Also, give corrective measures to remove the ballot, sort is as unreadable (out stack) and gives a way to restart or recount the uncoupled ballots. (Mis-feeds <= 1 per 5,000).	PCOS	Indeterminable	Categories 5 & 7 - Observations do not support the Status & The requirement is not found in the Statute or Rule cited. - Requirement is properly reporting misfeeds - Observations = No Misfeeds occurred.
01 - Pass	DB2-P3	220	TRUE	TRUE	TRUE	Each voting system shall be tested and examined by conducting at least three mock elections which shall include voting scenarios that exist within a primary election, a coordinated election, and a recall election.	PCOS	Pass	
01 - Pass	DB3-P3	301	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: One separate deck of ballots consisting of 10 ballots for each precinct generated for the Recall election that are flat as indicated in the instructions for vendors.	CCOS	Pass	
01 - Pass	DB3-P3	302	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Vote Center/ OS 5000.	CCOS	Pass	
01 - Pass	DB3-P3	303	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Provisional 5,000.	CCOS	Pass	
01 - Pass	DB3-P3	304	TRUE	TRUE	TRUE	Test all ballot reading functions – are they accurate and reliable as described in the requirement - how do scanner(s) responds to smudges, folds, etc; response to valid and invalid or absence of marks.	CCOS	Pass	Category 7 - The requirement is not found in the Statute or Rule cited.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB3-P3	305	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Early Voting / OS 5000.	CCOS	Pass	
04 - Fail	DB3-P3	306	TRUE	TRUE	TRUE	The system shall stop and inform operator of ballot handling errors such as misfeeds, damaged ballot, and multiple feeds. Also, give corrective measures to remove the ballot, sort is as unreadable (out stack) and gives a way to restart or recount the uncounted ballots. (Misfeeds <= 1 per 5,000).	CCOS	Fail	Category 7 - The requirement is not found in the Statute or Rule cited.
01 - Pass; 02 - Pass Conditional	DB3-P3	307	TRUE	TRUE	TRUE	Ballots shall be cast and counted in all applicable counter types (or counter groups) as necessary based on the parts included in the voting system. These are at a minimum: Poll Place (or Vote Center), Absentee, Provisional, and Early Voting. Ballots may be run through components 10 or more times depending on components and counter group being tested to achieve a minimum number of ballots cast as follows for each group: Absentee 10,000.	CCOS	(Pass- Conditional)	
zz - b	DB3-P3	308	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Any vendor that uses serial numbers printed on ballots for processing shall produce ballots of each requirement printed both with and without serial numbers.	CCOS	Not Applicable	Note: zz is the lead code for Non Applicable
01 - Pass	DB3-P3	309	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots shall be provided consisting of 25 ballots for each precinct/precinct split generated for each election that are flat (1500 minimum combined). At least one deck shall have the General Election data, and at least one shall have the Primary election data as indicated in the instructions for voting system providers;	CCOS	Pass	
01 - Pass	DB3-P3	310	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots consisting of 300 ballots of any single precinct from each election. Two of these decks shall be printed in all alternative languages as required for the State of Colorado pursuant to section 45.5.2.3.4;	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB3-P3	311	TRUE	TRUE	TRUE	The voting system provider shall provide 10 ballot marking pens/pencils/markers as defined by their system for marking ballots by the Secretary of State or the designee.	CCOS	Pass	
01 - Pass	DB3-P3	312	TRUE	TRUE	TRUE	The testing board shall mark a minimum of 300 ballots with marking devices of various color, weight, and consistency to determine accurate counting with a variety of marking devices.	CCOS	Pass	
01 - Pass	DB3-P3	313	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: One separate deck of ballots consisting of 200 ballots of any single precinct from the Coordinated election shall be provided that contains a two page ballot (races on four faces).	CCOS	Pass	
01 - Pass	DB3-P3	314	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Poll Place or Vote Center - ballots are flat - no score marks.	CCOS	Pass	
01 - Pass	DB3-P3	315	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Provisional - ballots are flat - no score marks.	CCOS	Pass	
01 - Pass	DB3-P3	316	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Absentee - ballots are scored and folded to fit in standard Colorado Absentee Mailing Envelopes.	CCOS	Pass	
01 - Pass	DB3-P3	317	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Early Voting - ballots are flat - no score marks.	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DB3-P3	318	TRUE	TRUE	TRUE	All ballots provided shall be blank with no marks on them. The following combinations of ballots are required: Four separate decks of ballots shall be provided consisting of 25 ballots for each precinct/precinct split generated for each election that are folded (1500 minimum combined). At least one deck shall have the General Election data, and at least one shall have the Primary election data as indicated in the instructions for voting system providers;	CCOS	Pass	
01 - Pass	DB3-P3	319	TRUE	TRUE	TRUE	Each voting system shall be tested and examined by conducting at least three mock elections which shall include voting scenarios that exist within a primary election, a coordinated election, and a recall election.	CCOS	Pass	
01 - Pass	DB3-P3	320	TRUE	TRUE	TRUE	Votes cast for an office to be filled or a ballot question or ballot issue to be decided shall not be counted if a voter marks more names than there are persons to be elected to an office or if for any reason it is impossible to determine the elector's choice of candidate or vote concerning the ballot question or ballot issue. A defective or an incomplete mark on any ballot in a proper place shall be counted if no other mark is on the ballot indicating an intention to vote for some other candidate or ballot question or ballot issue.	CCOS	Pass	
01 - Pass	DB3-P3	321	TRUE	TRUE	TRUE	Demonstrate the ability to process ballots in batch or non-batch format. (Central Count Scanners only).	CCOS	Pass	Category 7 - The requirement is not found in the Statute or Rule cited.
01 - Pass	DB4-P3	401	TRUE	TRUE	TRUE	Election scenarios shall feature at least 10 districts (or district types), comprised of at least 20 precincts that will result in a minimum of 5 unique ballot styles or combinations as indicated in the instructions to providers.	Software	Pass	
01 - Pass	DB4-P3	402	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Provisional – ballots are flat- no score marks.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	DB4-P3	403	TRUE	TRUE	TRUE	Votes cast for an office to be filled or a ballot question or ballot issue to be decided shall not be counted if a voter marks more names than there are persons to be elected to an office or if for any reason it is impossible to determine the elector's choice of candidate or vote concerning the ballot question or ballot issue. A defective or an incomplete mark on any ballot in a proper place shall be counted if no other mark is on the ballot indicating an intention to vote for some other candidate or ballot question or ballot issue.	Software	Not Applicable	
01 - Pass	DB4-P3	404	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Poll Place or Vote Center - ballots are flat – no score marks.	Software	Pass	
01 - Pass	DB4-P3	405	TRUE	TRUE	TRUE	Each voting system shall be tested and examined by conducting at least three mock elections which shall include voting scenarios that exist within a primary election, a coordinated election, and a recall election.	Software	Pass	
01 - Pass	DB4-P3	406	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Early Voting – ballots are flat – no score marks.	Software	Pass	
01 - Pass	DB4-P3	407	TRUE	TRUE	TRUE	The voting system provider is required to produce ballots in quantities identified below for each of the two elections. Enough ballots need to be created to conduct the testing of the voting system as defined in this rule. One complete set of ballots will be tested in each of the applicable counter types (or groups): Absentee – ballots are scored and folded to fit in standard Colorado Absentee Mailing Envelopes.	Software	Pass	
zz - Not Applicable	DC1-P3	101	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to accommodate a two page ballot (races on four faces) is required.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	DC1-P3	102	TRUE	TRUE	TRUE	Multiple Page Ballots. In any election where a multiple page printed ballot is used, a voter must vote and return all pages of the ballot at the same time. Any voter who has returned at least one page of a multiple page printed ballot will be considered to have voted. Any additional page returned at a later time shall not be counted but shall be appropriately marked, set aside, and preserved as other election materials in accordance with section 1-7-802, C.R.S.	DRE	Not Applicable	
01 - Pass	DC2-P3	201	TRUE	TRUE	TRUE	Multiple Page Ballots. In any election where a multiple page printed ballot is used, a voter must vote and return all pages of the ballot at the same time. Any voter who has returned at least one page of a multiple page printed ballot will be considered to have voted. Any additional page returned at a later time shall not be counted but shall be appropriately marked, set aside, and preserved as other election materials in accordance with section 1-7-802, C.R.S.	PCOS	Pass	
01 - Pass	DC2-P3	202	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to accommodate a two page ballot (aces on four faces) is required.	PCOS	Pass	
01 - Pass	DC3-P3	301	TRUE	TRUE	TRUE	Multiple Page Ballots. In any election where a multiple page printed ballot is used, a voter must vote and return all pages of the ballot at the same time. Any voter who has returned at least one page of a multiple page printed ballot will be considered to have voted. Any additional page returned at a later time shall not be counted but shall be appropriately marked, set aside, and preserved as other election materials in accordance with section 1-7-802, C.R.S.	CCOS	Pass	
01 - Pass	DC4-P3	401	TRUE	TRUE	TRUE	Multiple Page Ballots. In any election where a multiple page printed ballot is used, a voter must vote and return all pages of the ballot at the same time. Any voter who has returned at least one page of a multiple page printed ballot will be considered to have voted. Any additional page returned at a later time shall not be counted but shall be appropriately marked, set aside, and preserved as other election materials in accordance with section 1-7-802, C.R.S.	Software	Pass	
01 - Pass	DD1-P3	101	TRUE	TRUE	TRUE	The Ballot Definition Subsystem shall be capable of formatting ballot styles in English and any alternate languages as are necessary to comply with The "Voting Rights Act of 1965" 42 U.S.C. § 1973c et seq. (1965).	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DD2-P3	201	TRUE	TRUE	TRUE	The Ballot Definition Subsystem shall be capable of formatting ballot styles in English and any alternate languages as are necessary to comply with The "Voting Rights Act of 1965" 42 U.S.C. § 1973c et seq. (1965).	PCOS	Pass	
01 - Pass	DD3-P3	301	TRUE	TRUE	TRUE	The Ballot Definition Subsystem shall be capable of formatting ballot styles in English and any alternate languages as are necessary to comply with The "Voting Rights Act of 1965" 42 U.S.C. § 1973c et seq. (1965).	CCOS	Pass	
01 - Pass	DD4-P3	401	TRUE	TRUE	TRUE	The Ballot Definition Subsystem shall be capable of formatting ballot styles in English and any alternate languages as are necessary to comply with The "Voting Rights Act of 1965" 42 U.S.C. § 1973c et seq. (1965).	Software	Pass	
04 - Fail	DE1-P3	101	TRUE	TRUE	TRUE	The voting system shall be able to count all of an elector's votes on a provisional ballot or only federal and statewide offices and statewide ballot issues and questions, as provided under section 1-8.5-108(2), C.R.S.	DRE	Fail	
01 - Pass	DE1-P3	102	TRUE	TRUE	TRUE	If used for provisional ballots, the V-VPAT system shall be able to mark paper records as a provisional ballot through the use of human readable text and optionally printing barcode and/or serial number information which shall provide for mapping the record back to both the electronic record and the provisional voter for processing after verification in accordance with Article 8.5 of Title 1 C.R.S.	DRE	Pass	
01 - Pass	DE1-P3	103	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ (1) Provisional ballots shall □ be kept separate from all other ballots and counted separately.	DRE	Pass	
04 - Fail	DE1-P3	104	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ If twenty-five or more provisional ballots are cast and counted in a county, the designated election official shall report the results of voting by provisional ballot as a separate total. If fewer than twenty-five provisional ballots are cast and counted, the results of voting by provisional ballot shall be included in the results of voting by absentee ballot.	DRE	Fail	
02 - Pass Conditional	DE1-P3	105	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ Votes cast by provisional ballot shall not be included in any unofficial results reported and shall be reported only as part of the official canvass.	DRE	Conditional Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DE1-P3	106	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ The designated election official shall keep a log of each provisional ballot cast, each provisional ballot counted, and each provisional ballot rejected. The code for the acceptance or rejection of the provisional ballot as prescribed by the secretary of state shall be marked on the log.	DRE	Indeterminable	Category 4 - Insufficient description to support the finding and status
01 - Pass	DE1-P3	107	TRUE	TRUE	TRUE	The word "provisional" shall be marked on the provisional ballot and on the pollbook or signature card next to the elector's name.	DRE	Pass	
01 - Pass	DE2-P3	201	TRUE	TRUE	TRUE	The word "provisional" shall be marked on the provisional ballot and on the pollbook or signature card next to the elector's name.	PCOS	Pass	
04 - Fail	DE2-P3	202	TRUE	TRUE	TRUE	The voting system shall be able to count all of an elector's votes on a provisional ballot or only federal and statewide offices and statewide ballot issues and questions, as provided under section 1-8.5-108(2), C.R.S.	PCOS	Fail	
zz - Not Applicable	DE2-P3	203	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ (1) Provisional ballots shall □ be kept separate from all other ballots and counted separately.	PCOS	Not Applicable	
04 - Fail	DE2-P3	204	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ If twenty-five or more provisional ballots are cast and counted in a county, the designated election official shall report the results of voting by provisional ballot as a separate total. If fewer than twenty-five provisional ballots are cast and counted, the results of voting by provisional ballot shall be included in the results of voting by absentee ballot.	PCOS	Fail	
zz - Not Applicable	DE2-P3	205	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ The designated election official shall keep a log of each provisional ballot cast, each provisional ballot counted, and each provisional ballot rejected. The code for the acceptance or rejection of the provisional ballot as prescribed by the secretary of state shall be marked on the log.	PCOS	Not Applicable	
zz - Not Applicable	DE2-P3	206	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ Votes cast by provisional ballot shall not be included in any unofficial results reported and shall be reported only as part of the official canvass.	PCOS	Not Applicable	
01 - Pass	DE3-P3	301	TRUE	TRUE	TRUE	The word "provisional" shall be marked on the provisional ballot and on the pollbook or signature card next to the elector's name.	CCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	DE3-P3	302	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ The designated election official shall keep a log of each provisional ballot cast, each provisional ballot counted, and each provisional ballot rejected. The code for the acceptance or rejection of the provisional ballot as prescribed by the secretary of state shall be marked on the log.	CCOS	Not Applicable	
01 - Pass	DE3-P3	303	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ Votes cast by provisional ballot shall not be included in any unofficial results reported and shall be reported only as part of the official canvass.	CCOS	Not Applicable	
04 - Fail	DE3-P3	304	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ If twenty-five or more provisional ballots are cast and counted in a county, the designated election official shall report the results of voting by provisional ballot as a separate total. If fewer than twenty-five provisional ballots are cast and counted, the results of voting by provisional ballot shall be included in the results of voting by absentee ballot.	CCOS	Fail	
01 - Pass	DE3-P3	305	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ (1) Provisional ballots shall □ be kept separate from all other ballots and counted separately.	CCOS	Not Applicable	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
04 - Fail	DE3-P3	306	TRUE	TRUE	TRUE	The voting system shall be able to count all of an elector's votes on a provisional ballot or only federal and statewide offices and statewide ballot issues and questions, as provided under section 1-8.5-108(2), C.R.S.	CCOS	Fail	
04 - Fail	DE4-P3	401	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ The designated election official shall keep a log of each provisional ballot cast, each provisional ballot counted, and each provisional ballot rejected. The code for the acceptance or rejection of the provisional ballot as prescribed by the secretary of state shall be marked on the log.	Software	Fail	
zz - Not Applicable	DE4-P3	402	TRUE	TRUE	TRUE	The word "provisional" shall be marked on the provisional ballot and on the pollbook or signature card next to the elector's name.	Software	Not Applicable	
01 - Pass	DE4-P3	403	TRUE	TRUE	TRUE	The voting system shall be able to count all of an elector's votes on a provisional ballot or only federal and statewide offices and statewide ballot issues and questions, as provided under section 1-8.5-108(2), C.R.S.	Software	Pass	
01 - Pass	DE4-P3	404	TRUE	TRUE	TRUE	Handling of provisional ballots - reporting of results. □ (1) Provisional ballots shall □ be kept separate from all other ballots and counted separately.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DE4-P3	405	TRUE	TRUE	TRUE	Handing of provisional ballots - reporting of results. □ If twenty-five or more provisional ballots are cast and counted in a county, the designated election official shall report the results of voting by provisional ballot as a separate total. If fewer than twenty-five provisional ballots are cast and counted, the results of voting by provisional ballot shall be included in the results of voting by absentee ballot.	Software	Fail	
01 - Pass	DE4-P3	406	TRUE	TRUE	TRUE	Handing of provisional ballots - reporting of results. □ Votes cast by provisional ballot shall not be included in any unofficial results reported and shall be reported only as part of the official canvass.	Software	Pass	
01 - Pass	DF1-P3	101	TRUE	TRUE	TRUE	The V-VPAT shall consist of the following minimum components: The voting device shall contain a paper audit trail writer or printer that shall be attached, built into, or used in conjunction with the DRE. The printer shall duplicate a voter's selections from the DRE onto a paper record.	DRE	Pass	
01 - Pass	DF1-P3	102	TRUE	TRUE	TRUE	The V-VPAT shall consist of the following minimum components: The unit or device shall have a paper record display unit or area that shall allow a voter to view his or her paper record.	DRE	Pass	
01 - Pass	DF1-P3	103	TRUE	TRUE	TRUE	The V-VPAT shall consist of the following minimum components: The V-VPAT unit shall contain a paper record storage unit that shall store cast and spoiled paper record copies securely.	DRE	Pass	
01 - Pass	DF1-P3	104	TRUE	TRUE	TRUE	The V-VPAT shall consist of the following minimum components: These devices may be integrated as appropriate to their operation.	DRE	Pass	
01 - Pass	DF1-P3	105	TRUE	TRUE	TRUE	V-VPAT devices shall allow voters to verify his or her selections on a paper record prior to casting ballots. The voter shall either accept or reject the choices represented on the paper record. Both the electronic record and the paper record shall be stored and retained upon the completion of casting a ballot.	DRE	Pass	
04 - Fail	DF1-P3	106	TRUE	TRUE	TRUE	The V-VPAT printer connection may be any standard, publicly documented printer port (or the equivalent) using a standard communication protocol.	DRE	Indeterminable	Category 5 - Observations do not support the Status
04 - Fail	DF1-P3	107	TRUE	TRUE	TRUE	The printer shall not be permitted to communicate with any other device than the voting device to which it is connected.	DRE	Indeterminable	Category 4 - Insufficient description to support the finding and status
01 - Pass	DF1-P3	108	TRUE	TRUE	TRUE	The printer shall only be able to function as a printer, and not perform any other non-printer related services. †	DRE	Indeterminable	Category 4 - Insufficient description to support the finding and status
01 - Pass	DF1-P3	109	TRUE	TRUE	TRUE	Every electronic voting record shall have a corresponding paper record.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DF1-P3	110	TRUE	TRUE	TRUE	The V-VPAT device shall be designed to allow every voter to review, and accept or reject his/her paper record in as private and independent manner as possible for both disabled and non-disabled voters.	DRE	Pass	
01 - Pass	DF1-P3	111	TRUE	TRUE	TRUE	The V-VPAT system shall be designed in conjunction with State Law to ensure the secrecy of votes so that it is not possible to determine which voter cast which paper record.	DRE	Pass	
01 - Pass	DF1-P3	112	TRUE	TRUE	TRUE	The V-VPAT printer shall print at a font size no less than ten (10) points for ease of readability. Any protective covering intended to be transparent shall be in such condition that it can be made transparent by ordinary cleaning of its exposed surface.	DRE	Pass	
01 - Pass	DF1-P3	113	TRUE	TRUE	TRUE	The V-VPAT system shall be designed to allow each voter to verify his or her vote on a paper record in the same language they voted in on the DRE.	DRE	Pass	
01 - Pass	DF1-P3	114	TRUE	TRUE	TRUE	The V-VPAT system shall be designed to prevent tampering with unique keys and/or seals for the compartment that stores the paper record, as well as meet the security requirements of this rule. Additional security measures may be in place on the printer to prevent tampering with the device.	DRE	Pass	
01 - Pass	DF1-P3	115	TRUE	TRUE	TRUE	The V-VPAT system shall be capable of printing and storing paper record copies for at least 75 ballots cast without requiring the paper supply source, ink or toner supply, or any other similar consumable supply to be changed, assuming a fully printed double sided eighteen (18) inch ballot with a minimum of 20 contests.	DRE	Pass	
01 - Pass 04 - Fail	DF1-P3	116	TRUE	TRUE	TRUE	The V-VPAT unit shall provide a "low supply" warning to the election judge to add paper, ink, toner, ribbon or other like supplies. In the event that an election judge is required to change supplies during the process of voting, the voter shall be allowed to reprint and review the paper audit trail without having to re-mark his or her ballot, and the device shall prevent the election judge from seeing any voters' ballots.	DRE	(Pass-Fail)	
zz - Not Applicable	DF1-P3	117	TRUE	TRUE	TRUE	As of March 31, 2008, voting systems submitted for certification shall stop the V-VPAT printer of all forward operations of the DRE if the printer is not working due to paper jams, out of supply of consumables, or other issue which may cause the correct readable printing of information on the V-VPAT record as designed.	DRE	Not Applicable	
01 - Pass	DF1-P3	118	TRUE	TRUE	TRUE	The printed information on the printed ballot or verification portion of the V-VPAT device shall contain at least the following items: Name or header information of race, question or issue;	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DF1-P3	119	TRUE	TRUE	TRUE	The printed information on the printed ballot or verification portion of the VVPAT device shall contain at least the following items: Voter's selections for the race information;	DRE	Pass	
01 - Pass	DF1-P3	120	TRUE	TRUE	TRUE	The printed information on the printed ballot or verification portion of the VVPAT device shall contain at least the following items: Write-in candidate's names if selected;	DRE	Pass	
01 - Pass	DF1-P3	121	TRUE	TRUE	TRUE	The printed information on the printed ballot or verification portion of the VVPAT device shall contain at least the following items: Undervote or overvote information – this is in addition to the information on the review screen of the DRE;	DRE	Pass	
zz - Not Applicable	DF1-P3	122	TRUE	TRUE	TRUE	The printed information on the printed ballot or verification portion of the VVPAT device shall contain at least the following items: Ability to optionally produce a unique serial number (randomized to protect privacy);	DRE	Fail	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
01 - Pass	DF1-P3	123	TRUE	TRUE	TRUE	The printed information on the printed ballot or verification portion of the VVPAT device shall contain at least the following items: Identification that the ballot was cancelled or cast.	DRE	Pass	
01 - Pass	DF1-P3	124	TRUE	TRUE	TRUE	The VVPAT shall allow a voter to spoil his or her paper record no more than two (2) times. Upon spoiling, the voter shall be able to modify and verify selections on the DRE without having to reselect all of his or her choices.	DRE	Pass	
01 - Pass	DF1-P3	125	TRUE	TRUE	TRUE	Before the voter causes a third and final record to be printed, the voter shall be presented with a warning notice that the selections made on screen shall be final and the voter shall see and verify a printout of his or her vote, but shall not be given additional opportunities to change their vote.	DRE	Pass	
02 - Pass Conditional	DF1-P3	126	TRUE	TRUE	TRUE	All VVPAT components shall be capable of integrating into existing state testing and auditing requirements of the voting system.	DRE	Conditional Pass	
01 - Pass	DF1-P3	127	TRUE	TRUE	TRUE	The VVPAT component should print a barcode with each record that contains the human readable contents of the paper record and digital signature information. The voting system provider shall include documentation of the barcode type, protocol, and/or description of barcode and the method of reading the barcode as applicable to the voting system.	DRE	Pass	
01 - Pass	DF1-P3	128	TRUE	TRUE	TRUE	The VVPAT component shall be designed such that a voter shall not be able to leave the voting area with the paper record.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DG1-P3	101	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: The voting system shall provide a method by which electors can confirm any tactile or audio input by audio output using synthetic or recorded human speech.	DRE	Fail	
01 - Pass	DG1-P3	102	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Any voting system that requires any visual perception shall allow the font size as it appears to the voter to be set from a minimum of fourteen points to a maximum of twenty-four points before the voting system is delivered to the polling place. <input type="checkbox"/> <input type="checkbox"/> A san-serif font of 18 points will allow the most universal access.	DRE	Pass	
04 - Fail	DG1-P3	103	TRUE	TRUE	TRUE	The voting system shall provide audio information, including any audio output using synthetic or recorded human speech or any auditory feedback tones that are important for the use of the audio approach, through at least one mode, by handset or headset, at high volume and shall provide incremental volume control with output amplification up to a level of at least ninety-seven decibel sound pressure level with one incremental level of eighty-nine decibel sound pressure level.	DRE	Fail	
04 - Fail	DG1-P3	104	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> After the initial instruction from an election official, the elector shall be able to independently operate the voter interface device through the final step of casting a ballot without assistance.	DRE	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DG1-P3	105	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The elector shall be able to determine the offices for which the elector is allowed to vote and to determine the candidates for each office.	DRE	Fail	
04 - Fail	DG1-P3	106	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The elector shall be able to determine how many candidates may be selected for each office.	DRE	Fail	
04 - Fail	DG1-P3	107	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The elector shall have the ability to verify that the physical or vocal inputs given to the voting system have selected the candidates that the elector intended to select.	DRE	Fail	
04 - Fail	DG1-P3	108	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The elector shall have the opportunity to input a candidate's name for each office that allows a write-in candidate.	DRE	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DG1-P3	109	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The elector shall be able to review the candidate selections that the elector has made.	DRE	Fail	
04 - Fail	DG1-P3	110	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> Before casting the ballot, the elector shall have the opportunity to change any selections previously made and confirm a new selection.	DRE	Fail	
04 - Fail	DG1-P3	111	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The voting system shall communicate to the elector the fact that the elector has failed to vote for an office or has failed to vote the number of allowable candidates for an office and require the elector to confirm his or her intent to undervote before casting the ballot.	DRE	Fail	
22 - Not Applicable	DG1-P3	112	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The voting system shall warn the elector of the consequences of overvoting for an office.	DRE	Not Applicable	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DG1-P3	113	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The elector shall have the opportunity to review the elector's write-in input to the voter interface device, edit that input, and confirm that the edits meet the elector's intent.	DRE	Fail	
04 - Fail	DG1-P3	114	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: <input type="checkbox"/> The voting system shall require a clear, identifiable action from the elector to cast the ballot. The voting system shall explain to the elector how to take this action so that the elector has minimal risk of taking the action accidentally, but when the elector intends to cast the ballot, the action can be easily performed.	DRE	Fail	
04 - Fail	DG1-P3	115	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: After the ballot is cast, the voting system shall confirm to the elector that the ballot has been cast and the elector's process of voting is complete.	DRE	Fail	
04 - Fail	DG1-P3	116	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Audio ballots shall meet the following standards: After the ballot is cast, the voting system shall prevent the elector from modifying the ballot cast or voting another ballot.	DRE	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DG1-P3	117	TRUE	TRUE	TRUE	If a political subdivision acquires a new voting system, the system must be accessible to persons with physical, cultural/educational, mental/cognitive disabilities and provide the voter in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters.	DRE	Fail	
01 - Pass	DG1-P3	118	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: The voting system shall provide a tactile input or audio input device, or both.	DRE	(Pass - Fail)	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
22 - Not Applicable	DG1-P3	119	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: If the voting system can exceed one hundred twenty decibel sound pressure level, a mechanism shall be included to reset the volume automatically to the voting system's default volume level after every use, such as when the handset is replaced, but not before. Universal precautions in the use and sharing of headsets should be followed.	DRE	(NA - Fail)	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
04 - Fail	DG1-P3	120	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: If sound cues and audible information such as "beeps" are used, simultaneous corresponding visual cues and information shall be provided.	DRE	Fail	
04 - Fail	DG1-P3	121	TRUE	TRUE	TRUE	If a non-audio approach is used in conjunction with an audio counterpart, any spoken text shall also be presented on screen. A graphic representation of a ballot with a check, "X," etc. beside a candidate or proposition is allowed.	DRE	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DG1-P3	122	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Controls and mechanisms shall be operable with one hand, including with a closed fist, and operable without tight grasping, pinching, or twisting of the wrist.	DRE	(Pass - Fail)	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
01 - Pass	DG1-P3	123	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: The force required to operate or activate the controls may not exceed five pounds of force.	DRE	Pass	
04 - Fail	DG1-P3	124	TRUE	TRUE	TRUE	If a forward approach by a person in a wheelchair to a voting system is necessary, the maximum high-forward reach allowed shall be 48 inches (1220 mm) and the minimum low-forward reach shall be 15 inches (380 mm). If the high-forward reach is over an obstruction, reach and clearances shall be as shown in the Figure 1., or otherwise in accordance with the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities ("ADAAG"), as written at the time the system is certified for use in the state of Colorado;	DRE	Fail	
01 - Pass	DG1-P3	125	TRUE	TRUE	TRUE	If a side or parallel approach by a person in a wheelchair to a voting system is necessary, the maximum side reach allowed shall be 54 inches (1370 mm) and the low side reach shall be no less than 9 inches (230 mm) above the floor. If the side reach is over an obstruction, reach and clearances shall be as shown in the Figure 2., or otherwise in accordance with the ADAAG, as written at the time the system is certified for use in the state of Colorado.	DRE	Pass	
01 - Pass	DG1-P3	126	TRUE	TRUE	TRUE	The highest operable part of controls, dispensers, receptacles, and other operable equipment shall be placed within at least one of the reach ranges outlined in paragraphs (15) and (16) of this subsection.	DRE	Pass	
04 - Fail	DG1-P3	127	TRUE	TRUE	TRUE	The voting system shall provide a method by which voters can confirm any tactile or audio input by having the capability of audio output using synthetic or recorded human speech, which is reasonably phonetically accurate.	DRE	Fail	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DG1-P3	128	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Any operable controls on the input device that are needed by electors who are visually impaired shall be indicated in braille or otherwise discernible tactilely without actuating the keys.	DRE	(Pass - Fail)	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
04 - Fail	DG1-P3	129	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Voting booths shall have voting controls at a minimum height of thirty-six inches above the finished floor with a minimum knee clearance of twenty-seven inches high, thirty inches wide, and nineteen inches deep, or the accessible voter interface devices shall be designed so as to allow their use on top of a table to meet such requirements. Tabletop installations shall ensure adequate privacy.	DRE	Fail	
04 - Fail	DG1-P3	130	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: Devices providing audio and visual access shall be able to work both separately and simultaneously.	DRE	Fail	
01 - Pass	DG1-P3	131	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: If a nonaudio access approach is provided, the voting system may not require color perception. The voting system shall use black text or graphics, or both, on white background or white text or graphics, or both, on black background, unless the secretary of state approves other high-contrast color combinations that do not require color perception.	DRE	(Pass - Fail)	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DG1-P3	132	TRUE	TRUE	TRUE	Notwithstanding any other provision of this article, each voting system certified by the secretary of state for use in local, state, and federal elections shall have the capability to accept accessible voter interface devices in the voting system configuration to allow the voting system to meet the following minimum standards: For voice signals transmitted to the elector, the voting system shall provide a gain adjustable up to a minimum of twenty decibels with at least one intermediate step of twelve decibels.	DRE	(Pass - Fail)	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.
04 - Fail	DG1-P3	133	TRUE	TRUE	TRUE	All DRE voting devices shall use touch screen technology or other technology providing visual ballot display and selection. The voting system provider shall include documentation concerning the use of touch screen or other display and selection technology, including but not limited to: <ul style="list-style-type: none"> Technical documentation describing the nature and sensitivity of the tactile device (if the system uses touch screen technology); 	DRE	Fail	
01 - Pass	DG1-P3	134	TRUE	TRUE	TRUE	The voting system shall contain a control subsystem that consists of the physical devices and software that accomplish and validate the following operations: <ul style="list-style-type: none"> Voting system Preparation - The control subsystem shall encompass the hardware and software required to prepare remote location voting devices and memory devices for election use. Remote site preparation includes all operations necessary to install ballot displays, software, and memory devices in each voting device. The control subsystem shall be designed in such a manner as to facilitate the automated validation of ballot and software installation and to detect errors arising from their incorrect selection or improper installation. 	DRE	Pass	
01 - Pass	DG1-P3	135	TRUE	TRUE	TRUE	Specific minimum accessibility requirements include those specified in section §1-5-704 C.R.S., Secretary of State Rule 34, Rule 35 and the following: Buttons and controls shall be distinguishable by both shape and color.	DRE	Pass	
04 - Fail	DG1-P3	136	TRUE	TRUE	TRUE	Specific minimum accessibility requirements include those specified in section §1-5-704 C.R.S., Secretary of State Rule 34, Rule 35 and the following: Audio ballots shall meet the following standards: The voting system shall allow the voter to pause and resume the audio presentation.	DRE	Fail	
01 - Pass	DG1-P3	137	TRUE	TRUE	TRUE	Specific minimum accessibility requirements include those specified in section §1-5-704 C.R.S., Secretary of State Rule 34, Rule 35 and the following: Audio ballots shall meet the following standards: The audio system shall allow voters to control within reasonable limits, the rate of speech.	DRE	(Pass - Fail)	Category 6 - Inconsistency between Status shown in this worksheet and that in the workpapers.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DG1-P3	138	TRUE	TRUE	TRUE	Specific minimum accessibility requirements include those specified in section §1-5-704 C.R.S., Secretary of State Rule 34, Rule 35 and the following: No voting system or any of its accessible components shall require voter speech for its operation.	DRE	Pass	
01 - Pass	DG1-P3	139	TRUE	TRUE	TRUE	Specific minimum accessibility requirements include those specified in section §1-5-704 C.R.S., Secretary of State Rule 34, Rule 35 and the following: All Touchscreen technology shall be tested for use of fingers as well as non-human touch that is both wet and dry.	DRE	Pass	
01 - Pass	DG1-P3	140	TRUE	TRUE	TRUE	Specific minimum accessibility requirements include those specified in section §1-5-704 C.R.S., Secretary of State Rule 34, Rule 35 and the following: Voting systems shall include at least the ability to activate and navigate by means of push buttons, dials, wheels, keypads, and/or touch screens. By March 31, 2008, voting systems submitted for certification shall also include any form of either switches, sip and puff devices, or additional blink control devices.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - The rule seems to distinguish between "push buttons" and "switches." Are they equivalent?
04 - Fail	DG1-P3	141	TRUE	TRUE	TRUE	Specific minimum accessibility requirements include those specified in section §1-5-704 C.R.S., Secretary of State Rule 34, Rule 35 and the following: Adjustability of color settings, screen contrasts and/or screen angles/tilt may be made by either the poll worker or voter if the system uses a display screen. A minimum of two color settings, two contrast settings and two angles shall be available for all display screens.	DRE	Fail	
01 - Pass	DH1-P3	101	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Allow for multiple copies of the unofficial results at the close of the election.	DRE	Pass	
01 - Pass	DH1-P3	102	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Readings of the public counter and/or protective counter shall become a part of the paper audit record upon disabling the voting system to prevent further voting.	DRE	Pass	
01 - Pass	DH1-P3	103	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Names of the offices.	DRE	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass 04 - Fail	DH1-P3	104	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Names of the candidates and party when applicable.	DRE	(Pass - Fail)	
01 - Pass	DH1-P3	105	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Ballot titles.	DRE	Pass	
04 - Fail	DH1-P3	106	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Submission clauses of all initiated, referred or other ballot issues or questions.	DRE	Fail	
01 - Pass	DH1-P3	107	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: The number of votes counted for or against each candidate or ballot issue.	DRE	Pass	
04 - Fail	DH1-P3	108	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Date of election (day, month and year);	DRE	Fail	
01 - Pass	DH1-P3	109	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Precinct Number (ten digit format).	DRE	Pass	
04 - Fail	DH1-P3	110	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: County or Jurisdiction Name.	DRE	Fail	
04 - Fail	DH1-P3	111	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: State of Colorado.	DRE	Fail	

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Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DH1-P3	112	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Count of votes as indicated in this section.	DRE	Pass	
01 - Pass	DH1-P3	113	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Area for judge's signature with the words similar to: "Certified by us", and "Election Judges". Space should allow for a minimum of two signatures.	DRE	Pass	
01 - Pass	DH1-P3	114	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Machine-generated paper record of the time the voting system was closed.	DRE	Pass	
04 - Fail	DH1-P3	115	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Votes counted by a summary of the voting location, and by individual precincts.	DRE	Fail	
04 - Fail	DH2-P3	201	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: County or Jurisdiction Name.	PCOS	Fail	
01 - Pass	DH2-P3	202	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Allow for multiple copies of the unofficial results at the close of the election.	PCOS	Pass	
01 - Pass	DH2-P3	203	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Votes counted by a summary of the voting location, and by individual precincts.	PCOS	Pass	

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Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	DH2-P3	204	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Area for Judge's signature with the words similar to: "Certified by us", and "Election Judges". Space should allow for a minimum of two signatures.	PCOS	Fail	
01 - Pass	DH2-P3	205	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Count of votes as indicated in this section.	PCOS	Pass	
01 - Pass	DH2-P3	206	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Readings of the public counter and/or protective counter shall become a part of the paper audit record upon disabling the voting system to prevent further voting.	PCOS	Pass	
01 - Pass	DH2-P3	207	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Precinct Number (ten digit format).	PCOS	Pass	
04 - Fail	DH2-P3	208	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: Date of election (day, month and year);	PCOS	Fail	
01 - Pass	DH2-P3	209	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: The number of votes counted for or against each candidate or ballot issue.	PCOS	Pass	
01 - Pass	DH2-P3	210	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Submission clauses of all initiated, referred or other ballot issues or questions.	PCOS	Indeterminable	Category 4 - Insufficient description to support the finding and status - Rule requires Submission Clauses Observation describes totals.

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	DH2-P3	211	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Ballot titles.	PCOS	Pass	
01 - Pass	DH2-P3	212	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Names of the offices.	PCOS	Pass	
01 - Pass	DH2-P3	213	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Machine-generated paper record of the time the voting system was closed.	PCOS	Pass	
01 - Pass	DH2-P3	214	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Ability to print an Abstract of the count of votes to contain: Names of the candidates and party when applicable.	PCOS	Indeterminable	Category 4 - Insufficient description to support the finding and status - Rule requires printing party when appropriate - Observation shows only names of candidates.
04 - Fail	DH2-P3	215	TRUE	TRUE	TRUE	The voting system shall include hardware and software to enable the closing of the voting location and disabling acceptance of ballots on all vote tabulation devices to allow for the following: Abstract shall include a Judge's certificate and statement that contains: State of Colorado.	PCOS	Fail	
04 - Fail	EA1-P3	101	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct the post election audit as required herein.	DRE	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for providing the ability to conduct the audit, or for creation of a certain class of user and restriction of the function to that user? What is an appropriately authorized operator?
04 - Fail	EA2-P3	201	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct the post election audit as required herein.	PCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for providing the ability to perform the function or for creation of a certain class of user and restriction of the function to that user? What is an appropriately authorized operator?
04 - Fail	EA3-P3	301	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct the post election audit as required herein.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for providing the ability to perform the function or for creation of a certain class of user and restriction of the function to that user? What is an appropriately authorized operator?
01 - Pass	EA4-P3	401	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct the post election audit as required herein.	Software	Pass	
02 - Pass Conditional	EB1-P3	101	TRUE	TRUE	TRUE	The permanent paper record produced by the electronic or electromechanical voting system shall be available as an official record for any recount conducted for any election in which the system was used.	DRE	Conditional Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
zz - Not Applicable	EB1-P3	102	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct an election and meet additional requirements as identified in this section for procedures for voting, auditing information, inventory control, counting ballots, opening and closing polls, recounts, reporting, and accumulating results as required herein; All optical scan tabulation machines to be used in the recount must be tested prior to the recount, utilizing the procedures set forth in this section. Prior to the recount, the canvass board shall choose at random and test Voting Devices and precinct(s) to be utilized as a test deck for purposes of section 1-10.5-102. The purpose of a test deck is to assure the tabulation machines are counting properly. The precinct chosen shall contain at least 50 ballots. A hand tally shall be conducted of the selected precinct or of a minimum of fifty ballots contained within the selected precinct. A blank prom cartridge, rom cartridge, or memory card shall be utilized for the test deck. The ballots from the selected precinct test deck shall be processed through all scan tabulation machines. Totals of recounted ballots shall be processed, counted, and reported.	DRE	Not Applicable	
01 - Pass	EB2-P3	201	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct an election and meet additional requirements as identified in this section for procedures for voting, auditing information, inventory control, counting ballots, opening and closing polls, recounts, reporting, and accumulating results as required herein; All optical scan tabulation machines to be used in the recount must be tested prior to the recount, utilizing the procedures set forth in this section. Prior to the recount, the canvass board shall choose at random and test Voting Devices and precinct(s) to be utilized as a test deck for purposes of section 1-10.5-102. The purpose of a test deck is to assure the tabulation machines are counting properly. The precinct chosen shall contain at least 50 ballots. A hand tally shall be conducted of the selected precinct or of a minimum of fifty ballots contained within the selected precinct. A blank prom cartridge, rom cartridge, or memory card shall be utilized for the test deck. The ballots from the selected precinct test deck shall be processed through all scan tabulation machines. Totals of recounted ballots shall be processed, counted, and reported.	PCOS	Pass	
01 - Pass	EB2-P3	202	TRUE	TRUE	TRUE	The permanent paper record produced by the electronic or electromechanical voting system shall be available as an official record for any recount conducted for any election in which the system was used.	PCOS	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
04 - Fail	EB3-P3	301	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct an election and meet additional requirements as identified in this section for procedures for voting, auditing information, inventory control, counting ballots, opening and closing polls, recounts, reporting, and accumulating results as required herein; All optical scan tabulation machines to be used in the recount must be tested prior to the recount, utilizing the procedures set forth in this section. Prior to the recount, the canvass board shall choose at random and test Voting Devices and precinct(s) to be utilized as a test deck for purposes of section 1-10.5-102. The purpose of a test deck is to assure the tabulation machines are counting properly. The precinct chosen shall contain at least 50 ballots. A hand tally shall be conducted of the selected precinct or of a minimum of fifty ballots contained within the selected precinct. A blank prom cartridge, rom cartridge, or memory card shall be utilized for the test deck. The ballots from the selected precinct test deck shall be processed through all scan tabulation machines. Totals of recounted ballots shall be processed, counted, and reported.	CCOS	Indeterminable	Category 2 - Questionable interpretation of the requirement - Is the requirement for providing the ability to perform the function or for creation of a certain class of user and restriction of the function to that user? What is an appropriately authorized operator?
01 - Pass	EB3-P3	302	TRUE	TRUE	TRUE	The permanent paper record produced by the electronic or electromechanical voting system shall be available as an official record for any recount conducted for any election in which the system was used.	CCOS	Pass	
04 - Fail	EB3-P3	303	TRUE	TRUE	TRUE	Sequence of Resolution Procedures for Central Count Optical Scan Procedures are (1) A zero tape shall be run indicating no votes cast or counted before the counting begins.	CCOS	Pass	
01 - Pass	EB4-P3	401	TRUE	TRUE	TRUE	The Voting system shall provide for appropriately authorized operators to conduct an election and meet additional requirements as identified in this section for procedures for voting, auditing information, inventory control, counting ballots, opening and closing polls, recounts, reporting, and accumulating results as required herein; All optical scan tabulation machines to be used in the recount must be tested prior to the recount, utilizing the procedures set forth in this section. Prior to the recount, the canvass board shall choose at random and test Voting Devices and precinct(s) to be utilized as a test deck for purposes of section 1-10.5-102. The purpose of a test deck is to assure the tabulation machines are counting properly. The precinct chosen shall contain at least 50 ballots. A hand tally shall be conducted of the selected precinct or of a minimum of fifty ballots contained within the selected precinct. A blank prom cartridge, rom cartridge, or memory card shall be utilized for the test deck. The ballots from the selected precinct test deck shall be processed through all scan tabulation machines. Totals of recounted ballots shall be processed, counted, and reported.	Software	Pass	

Test Status	Test Number	Test Number	First Review	Second Review	Supervisor Review	Requirement Text	Equipment Type	Auditor's Test Status	Audit Finding Category and Comment
01 - Pass	EC3-P3	302	TRUE	TRUE	TRUE	Recount Procedures for Optical Scan for Central Count Optical Scan Procedures include: (1) Optical scan equipment must be set to consistent sensitivity standards for each system type, must be tested prior to the recount, and shall be programmed to sort undervotes for the individual race(s), issue(s) or question(s) being recounted.	CCOS	Pass	